

# sputnik

MONTHLY DIGEST

November 1968

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Profile of PETER USTINOV

New books reviewed by FREDERICK LAWS

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# LETTERS TO THE EDITOR

## Vladimir Mayakovsky

Thank you very much for the article on Vladimir Mayakovsky in the July SPUTNIK. As a matter of interest: I noticed a discrepancy (although trivial), in the first line of the poem "An Amazing Adventure of Vladimir Mayakovsky".

According to Dorian Rottenberg's translation, this particular line reads, "The sunset blazed like sixty suns".

And now the problem: I have got a translation by Hugo Huppert in "Vladimir Mayakovsky, Ausgewählte Werke 1" (Verlag Volk und Welt, Berlin), which reads, "Die Sonne, hundert Sonnen stark".

Since I have not got a copy of the original Russian version, could you solve this mathematical problem for me?

E. J. P. Bol, Scheveningen, Netherlands.

● Please subtract the English version from the German, then add the result to the German original. The result: 100-60-40; 40+100=140. In Russian, Mayakovsky reads, "The sunset blazed like 140 suns"—ED.

## Opinions and suggestions

I enjoy your magazine very much. It covers a wide field of subjects and has excellent illustrations. The strange happenings such as the Tungus Catastrophe (June issue) are most interesting. I think an article on the frozen graves of the Altai would interest your readers, too.

M. Doody, Killiney, Eire.

I would like to offer one small criticism of your magazine. The content is wide-ranging in its subjects, but could we have fewer articles on the war with the Germans? In the June issue I noted three articles of wartime incidents. One perhaps now and again, but please—not three in the same month. I would prefer articles on museums.

A word of praise for the colour photographs in the June issue: they are excellent.

Denis Rander, Leeds, England.

## WAR

War has been with us for many centuries now, it takes men from their work from fishing and the plough, oh God, how we do hate it, coming in many shapes in forms and sizes too, all dragging us deep down to meet eternal hell.

T. Fortlage, Littlehampton, England.

## Touring the USSR

My wife and I have just returned from a 15-day tour of your wonderful country, visiting Kiev, Moscow and Leningrad. Everywhere we have met with friendly kindness and help in overcoming little difficulties due to our scanty knowledge of the Russian language. We hope to visit the USSR again next year, and perhaps travel as far as Samarkand.

E. R. Osler, Lowestoft, Suffolk, England.

## Fleeing rams

Reference your March, 1968, issue in which an article, "Shearing for Thrills" by Boris Sapelnyak, was published. I was deeply overjoyed by the news that Ismail Baitomas, the champion for the year 1967, fleeced 15 rams in 34 minutes 25 seconds, whereas in our country it takes much longer to shear the same number of rams.

Dr. H. L. Srivastava, Bangurman, Umnao, India.

## Prehistoric paintings

At last we have in English a magazine which shows the true diversity of peoples' interests in Russia!

I am very interested in prehistoric paintings and engravings, and have visited a number of such sites in France and Spain. Consequently I was very interested to read the article by K. Lanchkin in your March issue on the Karéon rock engravings.

P. Allworth-Jones, Sheffield, England.

Continued on page 5

Featuring colour pictures — medicine, science, space travel — fiction — memoirs — the arts — sport — hobbies — fashions — cuisine — humour.

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## LETTERS TO THE EDITOR

### Pen-friends wanted

*Ever since the first issue, I have been a reader of your magazine. I like it very much and it gives me the opportunity to increase my knowledge of your country, which I recently visited.*

*I am interested in having pen-friends, especially in USSR and Asia. My hobbies are sports, travel, stamps and coin-collecting. I can write in German, French and English. My age is 23.*

*Hans A. Hoogendorn, 64 Lippe-  
Blesterfeldweg, Loorduisen, Holland.*

*My friend Charlene and I are very interested in having European pen-pals. The only problem is that we can only write English with any degree of fluency. We can, however, manage a stilted variety of French and are trying to teach ourselves Russian. Charlene is 16, and I am 15.*

*Helen G. Hester, 69 Nok Hill Road,  
New London, Conn., USA.  
Charlene A. Fox, c/o DeWaffe,  
Hill Top Acres, Salem, Conn., USA.*

*I want to have many, many friends all over the world. I can correspond in Bulgarian, Russian and, to some extent, in English. I am interested in applied arts, music, stamp-collecting and chemistry. I shall answer anyone who writes to me. I love people!*  
*Tatyana Dikov, Izlok Complex, Bldg. 1,  
sh. V, Sofia, Bulgaria.*

*I want pen-friends from Europe. I am 25 years old. My hobbies are: stamps, viewcards, photography, journalism, magazines, sports, etc.*

*Dev Prakash Kaurhik, 6/2 Sweet Nagar,  
Dayalbagh, Agra-5 (U.P.), India.*

*I am very keen to have pen-friends. I am 20 years old and very fond of cricket, swimming, motor-driving, stamp-collecting.*

*Ashok E. Bhide, E/3 Sahakar Niwas,  
Bhuvanil Shankar Road, Dadar,  
Bombay 28, India.*

*I am a Dutch scholar and I should like to have pen-friends in East European countries. I am 17, and my main interest is space travel. I write English, German and French (a very bad French).*

*John J. M. Koster, Boerhamelvaan 4,  
Utrecht, Holland.*

*I am interested in meeting and writing to people and would like to have pen-friends all over the world, but especially in Russia and New Zealand. I am 20 years old and am interested in agriculture, travel, horses and art.*

*Margaret Moore, 44 Sister Road,  
Bentley Heath, Solihull,  
Warwickshire, England.*

*I am 45 and work as a secretary. I am fluent both in English and French (and I have a friend who can translate from and into Russian). I am very interested in philology, psychology and natural health and I would be happy to hear from friends similarly interested in any of the Socialist countries to discuss and exchange views on ideas, books, etc.*

*Mrs. Yolande Bevan, 13 Red Post Hill,  
London, S.E.24, England.*

*I would like to have pen-pals in as many countries as possible. I am 20, a university student. I have a variety of interests, including reading, philately, movies, radio, theatre, literature, politics and travel. I write English, Russian, German and French.*

*Miss Nagwa Khatib, 16 American Street,  
Tanta, U.A.R.*

*I am a 19-year-old English factory worker, at present learning Russian and Serbo-Croat, and would like to have pen-friends in Eastern Europe. My interests include literature (both ancient and modern), of all countries, music, theatre and films, hiking and mountain-walking, history and sociology.*

*Robert M. Woodcock, 2 Hill Street,  
Higher Ince, Wigan, Lancashire, England.*

## LETTERS TO THE EDITOR

I am 19 years old and I can write English and Pakhtani (Urdu).

Al-Riaz Ahmed, CH: Building, 2nd Floor,  
Sheikhupura Road, Gujranwala,  
West Pakistan.

I would like very much to have pen-friends from different countries on scientific subjects, such as possible life on the planets, the Moon, Mars and Venus. I am also interested in the theory of the possibility of a nuclear blast of a spaceship which destroyed a visiting spaceship and all beings aboard on June 30, 1908, at Tunguska. I speak and read only English. I have been in the field of science for 27 years—but as an amateur, really, as a hobby. I am 61 years old, a partial shut-in, so have kept my mind alert in this field.

Mrs. Gindys Fusaro, Route 3, Box 223,  
Huntington, New York, USA 11743.

I am 24 years of age, a part-time law student (during office hours I am an office worker), and interested in classical music, literature, motor cars (and motor cycles), and world affairs in general.

M. Bealogue, P.O. Box 1367,  
Bloumfontein, South Africa.

I want to have pen-friends all over the world. I am a student. My general interests are: literature, fibus, travel, study and radio. I know English and Arabic.

Mariwan Namiq, c/o Mahamad Raza,  
Al-Baladia, Swohalannia, Iraq.

I am 12 years old and a school pupil. I know English and Danish. My hobbies are: music, Scouting, reading and correspondence.

Birgitte Vange, Reageraenget 1,  
Højbjerg, Denmark.

I am interested in having pen-friends from all countries. I am 30 years old. My main interests are: correspondence, picture post

cards, philately (mint and used), coins, music, literature and photography.

K. D. H. Edirisinghe, P.O. Box 318,  
Colombo, Ceylon.

I would like pen-friends in Eastern Europe. I am 18 years old. My interests are art, classical music and history. I know only English.

Mary Celeste Roney, 302 North Maple  
Grove, Hudson, Michigan, U.S.A. 49247.

I am an engineering student and I would like to have pen-friends all over the world. General interests. I write Portuguese, English and French.

Paulo Afonso, Rua 5, No. 7,  
Goiania (Central), Goiás, Brazil.

I am 18 years old and interested in stamps, languages, art, history and politics. I know English, Swedish, Finnish and little Russian and French.

Gösta Ölin, Forsby Benas, Finland.

I am 21 and would like to correspond with friends from all parts of the world. I know Russian and English. My hobbies are reading and hiking. I love history and nature.

Bogusława Stymach, ul. Walności 292/6,  
Zabrze 1, Katowice woj., Poland.

I want pen-friends all over the world. I am fond of sports, pop music, cinema, records, stamps, stickers and singers' photos. I am 18.

Janusz Chapiński, ul. Gałczyńskiego 45,  
m.J. Poznań 33, Poland.

I am keen to have pen-pals in different countries. I am 24 and like music, speak Italian and Russian. I study at the Theatre Institute.

Slavi Tsvetanov Gergov, ul. Rakovska 108 a,  
VITIZ, "Krestis Sarafar", Sofia, Bulgaria.

We are always glad to hear from our readers. Please address your letters to  
The Editor, Sputnik Magazine, 2 Pushkin Square, Moscow, USSR

## MISTER SPUTNIK





*Desalination plant at Mangyshlak Peninsula on the Caspian Sea*

# ATOM— WORKER NOT SOLDIER

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**An expert  
sums up the  
achievements,  
problems  
and prospects  
of atomic  
energy**

---



*The atomic ice-breaker Lenin cutting her way through heavy pack-ice.*

# ATOM- WORKER NOT SOLDIER



*Is an atomic power station a luxury or a necessity? This is one of to-day's challenging questions, and it is discussed here by a man who for a number of years was one of the top executives of the International Atomic Energy Agency. He took part in the first and second international conferences on the peaceful uses of atomic energy, held at Geneva in 1955 and 1958, and was chairman of the 1964 conference. In this excerpt from his book, Peace and the Atom, he discusses several aspects of the peaceful uses of atomic energy.*

*by Vassili YEMELLIANOV, Corresponding Member, USSR Academy of Sciences, who is pictured opposite.*

Shortly after the commissioning of the world's first atomic power station in the Russian town of Obninsk, on June 27, 1954, a chain reaction followed in the development of atomic energy for peaceful uses. One after the other, atomic power stations were established at Calder Hall, Britain (1956), Shippingport, USA (1957), and Marcoule, France (1958).

Capacities grew still faster: Obninsk had a capacity of 5,000 kw; the Siberian plant of 1958 and the Beloyar plant of 1963 reached 100,000 kw; and by 1964 the Novovoronezh plant could produce 240,000 kw.

The second sections of these plants will have more power still: Beloyar, 200,000 kw; Novovoronezh, 375,000 kw; and the Siberian plant, more than 500,000 kw. Their third and fourth sections, now under construction, will be more powerful again. Novovoronezh, for instance, will have two reactors, each with a capacity of 440,000 kw.

This kind of development raises the question of whether the drive for more atomic power is a kind of tribute of respect for science and technology, or whether it is a response to the dwindling of other power sources.

Scientists reported to the 1964 international conference on the peaceful uses of atomic energy that organic fuel resources would be exhausted in Africa in 50 years, in

the Middle East in 35 years, in Latin America in 20 years, and in South-East Asia and the Far East in 15 years.

Even in those countries where today it is in abundance, organic fuel will be used up in 100 to 200 years, at the present rate of power engineering development.

The Soviet Union has colossal resources of combustible minerals, but regards it as an impermissible extravagance to use them up in the production of electric power when they are so valuable for the chemical industry.

That is where nuclear energy comes in. It relieves the fuel hunger and frees vast organic resources to be turned into chemical products ranging from nylon to synthetic caviar.

So atomic power plants are necessary. But they do pose technical and economic problems.

### Are they economical?

The short answer is "No", but it depends on circumstances. Until recently atomic power plants were usually more expensive than other types of power stations.

But there is another aspect. In the USSR, for instance, mineral deposits are scattered unevenly over a territory of 8.75 million square miles, with a varying cost of mining and delivery. The most accessible and best-developed coal



deposits, for example, are situated mainly in the east, affecting the cost of electric power in the following way:—

Central Asia and Kazakhstan	0.12-0.15	kopek per kwh
Siberia	0.17-0.21	" "
Urals	0.24-0.28	" "
European part of USSR	0.40-0.45	" "

Experts say atomic power stations with a reactor capacity of 500,000 kw are economically advantageous when the cost of electric power is 0.37-0.42 kopek per kwh.

So atomic plants may prove quite profitable in many parts of the world now, let alone in the future.

#### Are giant plants needed?

Large and small plants are being built in the USSR, where installations of the ARBUS type (750 kw) and TES-3 type (1,500 kw) have already won a reputation. These are the lowest capacities so far found to be economically sound—they are designed for remote northern regions lacking fuel deposits, and where transport costs are 30 to 40 times the cost of the fuel itself.

The "Romashka" ("Daisy") plant, commissioned in 1964 at the Kurchatov Institute of Atomic Energy, converts heat directly into electric current, with a capacity of 0.5-0.8 kw. Its secret lies in the fact that its miniature reactor heats semi-conductor

thermo-elements, converting the heat directly into power.

The usual method is to convert the heat of the uranium fuel in the reactor into mechanical energy by means of a steam jet rotating a turbine and generator to produce current.

This installation has worked reliably and uninterruptedly for 15,000 hours, but, of course, it cannot yet compete with big reactors.

Nevertheless, it is an interesting first step.

#### Is there enough fuel?

Uranium-235, the only natural nuclear fuel, represents only about 0.7 per cent of mined natural isotopes, the rest of which are uranium-238, an inactive isotope. Certainly, uranium-238, when bombarded by neutrons, can be transformed into plutonium-239, which is a nuclear fuel; but only one-fiftieth of the uranium-238 charged in an ordinary reactor with uranium-235 lends itself to such transformation.

World resources of uranium-235 can yield 1,000,000,000,000,000 kwh of electricity. This sounds a lot, but it is only one-tenth of the energy contained in the world's coal, oil and gas deposits. So uranium-235 cannot be relied upon to relieve fuel hunger.

However, more nuclear fuel is available from transforming inactive uranium-238 into plutonium-239 with the aid of reactors working on fast neutrons, and this is under way in the USSR, where prospects of

Reactor room at Belyar atomic power station.



expanding reproduction of nuclear fuel have been studied since 1949.

In 1968 the world's biggest reactor working on fast neutrons, with a capacity of 350,000 kw, was commissioned at Mangyshlak Peninsula, on the Caspian Sea. It not only produces electricity, but desalinates sea water—particularly useful in the arid Caspian regions.

#### And not just power stations

September 12, 1959, saw the launching at Leningrad of the world's first atom-powered surface ship, the ice-breaker *Lenin*. The engines are powered by two reactors, with a third in reserve.

The most powerful ship of her class, the *Lenin* has engines of 44,000 h.p., consuming only two or three kilograms of uranium-235 for a 100-day cruise. By contrast, the *Moscow*, an ordinary ice-breaker with an engine power of about 16,000 h.p., consumes 100 tons of diesel fuel a day, and can carry up to 3,000 tons of fuel lasting no more than a month.

As an ordinary steamship, the *Lenin* would require 27,500 tons of oil for a 100-day cruise. But her displacement is only 16,000 tons, so such a ship with ordinary engines working on organic fuel is a technical impossibility.

Since her launching in 1959, when each reactor was charged with 80 kilograms of uranium-235, the ice-breaker's reactors have been recharged only twice—in 1963 and 1966. Refuelling only every three

years means an immense saving in time and cargo capacity.

Not only that, but the *Lenin* is not threatened with the danger that faces an ordinary ice-breaker, which consumes additional fuel when cutting through the pack-ice and, if the fuel runs out, the ship may be trapped and crushed by the ice.

In six seasons, the *Lenin* has covered about 70,000 miles in the Arctic, piloting 457 ships and extending Arctic Route navigation from 100 to 160 days a year.

In 1964 the Soviet Government decided to build more atomic ice-breakers, and now work is proceeding on atomic engines for aeroplanes and railway locomotives.

#### Co-operation to solve problems

Soviet atomic power plants now have a combined capacity of almost 2,000,000 kw, and in the 1970's construction of a whole series of large plants will begin in the European part of the country. By 1980 their capacity will have reached tens of millions of kilowatts.

In other countries, too, construction of atomic power plants is in full swing. By 1966 there were already 14 such plants in the United States, with an aggregate capacity of more than 1,000,000 kw, and there were nine plants in Britain, with a capacity of about 3,000,000 kw.

At the first conference of the International Atomic Energy Agency in 1957, the USSR, USA and Britain proposed placing at the Agency's disposal part of their stocks of nuclear

fuel, of which at the time they were the sole producers. As a result, the Agency received 5,140 kilograms of uranium-235.

Now atomic reactors, both industrial and experimental, have been built in about 50 countries, a number of which the USSR has been helping

in the construction of reactors and the use of the energy for peaceful purposes.

The joint efforts of the world's scientists and engineers will help to solve a whole range of technical and economic problems connected with nuclear energy.

Active zone of reactor MIR-2 at Molekess Atomic Research Institute



# AGENTS

# 03

## LICENCE TO SAVE

The Editorial Board of SPUTNIK has received many letters from abroad, asking for a description of the organisation of emergency medical services and first-aid in the Soviet Union.

The author of this article, Elena Pralnikova, spent days and nights in the emergency aid stations of Moscow and Leningrad. She attended meetings and conferences of the medical staff engaged in this work, and interviewed many of the people in charge of the organisation.

by Elena PRALNIKOVA

The light on the switchboard flashes on and the operator picks up the receiver and says, "Emergency".

The voice at the other end is distraught and incoherent: "He's dying, he's dying . . ." The operator cuts in and eventually elicits the necessary information. Within a few minutes help is on the way.

\* \* \*

I arrived at the emergency station in a sombre frame of mind. The prospect of being a spectator of human tragedies and griefs in the interests of a story was not an appealing one.

The atmosphere of the station, however, was cheerful and friendly. The first thing I heard on entering the big, airy room was laughter and the sound of jazz music coming from a radio in the corner. Several men were playing dominoes . . . someone was feeding the goldfish in the aquarium . . . someone was reading.

I must admit this joking and this calm gave me a jolt when I first came to the emergency aid station. "Cynical, callous bunch, that's what you are," I thought. And it was only later that I realised how wrong I was.

I talked to doctors, people of different ages and characters who have trained themselves to see, not a person in pain, but a patient who must be helped. The entire human aspect of the drama is somehow relegated

to the background—this aspect is for-borne, and not when you are on the job. Doctors must protect their nerves, or else they would not be able to work.

The icy, slippery street and the sickening skid and smash-up; the heart attack; the state of shock; the accidental poisoning of a child; every form and manner of injury and death met with in the homes and streets of a modern metropolis of several million people is familiar to the personnel of the emergency medical service.

And in the meantime there was light and warmth and good cheer . . . until the inter-com cracked and the tinny voice of the dispatcher announced, "Special, on duty!"

The tinny voice is heard in the garages, in the cafeteria, in the doctors' lounge. The voice is heard and noted by every person on the premises. The voice rings above music or laughter or conversation. And yet, but for an infinitesimal pause, everything is the way it was before the voice. The game of dominoes goes on, the jazz wails and someone is laughing. But three people leave their places and head for the door.

A "special" call means a situation where life is threatened. In this case a team of one experienced doctor and two *feldschers* (doctor's assistants) are sent out.

Outside, the ambulance driver is

already warming up the engine. One of the three gets the facts from the dispatching office, and within a minute or two we are on our way into the night.

★ ★ ★

Any hour of the day or night, by dialling 03, you will be connected with the emergency medical service. It is convenient because you don't have to remember the telephone number of the nearest hospital and if you are calling from a pay-telephone you don't need the usual two kopecks before you are connected.

Manning the switchboard of the emergency service is not a simple job. The woman who is incoherently moaning that her husband is dying must be forced to give the name, address, age and general symptoms of the stricken man.

Also, people react differently to family emergencies. Behind the laconic words "Something seems to be wrong with his heart" may be a potentially fatal heart attack, whereas the hysterical cry "He's dying" may mean a bad case of indigestion.

The switchboard operators themselves say that they need a thousand and one intuitions to evaluate correctly a call. Each of them possesses a medical education: essential to determine what kind of ambulance and medical team must be sent out or whether, indeed, it is necessary to send any.

The switchboard operators are a type of "agent 03" who, unlike "007" with his licence to kill, have a licence to save lives.

As soon as the call is received and the information noted, the operator gets in touch with a dispatcher. In Moscow there are six. Each of them knows his area, the locations of the nearest hospitals to the scene, and how many beds are available in each. The dispatcher then sends the call out to an emergency station. Direct telephone lines make it possible to handle a situation in minutes.

★ ★ ★

There are 22 emergency stations, serving all areas of Moscow. More than 350 highly-qualified doctors are attached to them. In addition, 1,350 paramedical personnel and some 1,500 nurses complement the staff. At any time of the day or night, 180 ambulances are available in the city.

Some areas seem more "accident-prone" than others. Certain emergency stations have as many as 17 ambulances at their disposal; others, as few as two.

The ambulances are divided into three categories. The "specials" are equipped with breathing equipment, cardiographs, anaesthetic equipment, electro-stimulators and defibrillators for restoring normal heart-beats.

The second category of ambulance is also serviced by a doctor and two *feldschers*, but the equipment is less elaborate.

The third category of ambulance is used to transport non-emergency patients and women in labour to hospital. In the latter case a midwife accompanies the woman.



*It takes just about three minutes for the ambulance team to be on the way to an emergency call.*

*All cases are first directed to the doctor at the emergency post.*



*These telephone girls keep a day-and-night vigil in the 03 call-room.*



Recently the question has been raised of if it is really necessary to send out fully-qualified doctors on emergency calls. The cost to the State is enormous.

Leonid Shapiro, head doctor of the emergency service in Moscow, believes it is essential. "After all, it's not just a case of transporting the patient. Often the diagnosis must be made on the spot and measures taken immediately. In some cases a human life depends on how soon treatment begins."

Free medical care has its positive and negative aspects. On the one hand, anybody, regardless of financial situation, may receive the aid of highly-qualified doctors and be treated in hospital if necessary. On the other hand, the slightest twinge, and people call the doctor.

Generally speaking, most house-calls are directed by the dispatcher to the local hospital rather than to the emergency stations. The advantage in this is that the local hospital will have the medical history of the patient and its doctor can familiarise himself with the background before making the call.

★ ★ ★

Thus the emergency services in our country cover all major cities. The service is also extended to rural areas. Altogether there are 2,630 emergency stations in the country, annually serving 40 million people.

In many respects, Leningrad leads the way. The specially-equipped ambulances already described were first demonstrated in Leningrad, at

a conference of emergency medical service employees in 1957.

Vassili Golyakov, head doctor of the Leningrad service, suggested at the conference that specialists, and not GPs, should go out with the ambulances.

Like all new ideas, Golyakov's suggestion met with mixed reactions. Some thought that specialists were unnecessary—an emergency doctor is faced with the most varied cases. Others took up the idea with enthusiasm.

Golyakov was proved right. Time showed that specialists, travelling in specially-equipped ambulances, justified the expense. They fall into the following categories:

- Heart—usually concerned with severe attacks.
- Neurological—brain haemorrhages, concussions.
- Pediatric—children's illnesses.
- Toxic—any form of poisoning.
- Shock—usually the result of motor accidents.

Golyakov not only has the reputation of an excellent administrator, but is also known as an innovator whose ideas and experience have led to new forms of organisation for the emergency service.

★ ★ ★

Today Leningrad is the only city in the country, and perhaps in the world, which provides emergency psychiatric and haematological treatment. The credit for this belongs in the first place to Golyakov.

The haematological emergency service has been in existence for a



*Within a few minutes of an O3 call, a highly qualified doctor is at the scene of the emergency. Sometimes a life depends on diagnosis being made, and treatment begun, on the spot.*



little over one year. Unlike other emergency services, it is provided to hospitals.

Diseases of the blood are comparatively rare and often are connected with non-clotting. In the main, haematologists are scientists rather than practising doctors.

Considering the comparatively small number of cases, it is not practicable for hospitals to have haematologists on the staff or to possess the requisite laboratory facilities and medicines. Nevertheless, on occasion the services of a haematologist are needed and the emergency service fills the bill.

In Leningrad the haematological ambulance, just like any other, is on call 24 hours a day, together with a team of three—a specialist haematologist and his two assistants.

★ ★ ★

In Moscow there is no special service of this type, but the Institute of Haematology provides specialists for emergency duty.

Leonid Shapiro does not believe that an ambulance of the type described should be a part of the general service, which by name and nature provides for emergencies.

Vladimir Ilyin, a young doctor in the organisational department of the service, disagrees. He thinks that all major cities should be serviced, not only by such haematological ambulances, but also by special ambulances for gynaecological and psychiatric cases and infectious diseases.

Leningrad established the country's



*Leonid Shapiro  
head doctor of the  
Moscow  
emergency service,  
in daily  
conference with  
his assistants.*



*Dr. Felix Privorotsky, of the  
psychiatric emergency station in  
Leningrad.*

only psychiatric emergency station three years ago. In the opinion of Felix Privorotsky, who is in charge, the system has several advantages.

For one thing, the staff of the psychiatric emergency station all have experience in general emergency work. Therefore, they are competent to make swift, on-the-spot decisions, which the ordinary, clinical psychiatrist might find hard to make. Besides, they can administer aid inside the speeding ambulance without injuring the patient or themselves.

It is noteworthy that in Leningrad the incidence of mistaken diagnoses in the mentally ill has been cut to 0.04 per cent. This is because the decision to send patients to hospital is made here by an expert emergency service, and not by police, as is often the case in other countries where the incidence normally runs to around 12 per cent.

The psychiatric emergency service does not resort to strait-jackets or to violence in dealing with patients. The idea is to spare the patient's feelings, which otherwise may lead to nervous shock. That is why its ambulances have no barred windows and look just like any other medical vehicle.

\* \* \*

Soviet medical schools do not yet train specialists in emergency aid. And yet experience shows that it is a special calling, demanding not only standard medical training, but also special knowledge and particular techniques.

Today the knowledge is gained

through experience. But the time is not far off when specialists will be trained in the schools, just as in other fields of medicine.

Does all this mean that the Soviet emergency medical service has no faults and no problems? Despite its great advantages, which put medical aid within reach of every citizen, there is still a lot to be done to improve the first-aid service. Some of the problems were recently taken up by DR. VLADIMIR TOPOLIANSKY, of the Moscow Emergency Medical Service, in an article published in LITERATURNAYA GAZETA.

## WITHOUT THOSE ROSE-COLOURED GLASSES

Our main difficulty stems from the shortage of skilled medical staff.

Most of the doctors who come to work with us are graduates from medical schools and colleges. In some two or three years the young doctor gains experience, develops what we call "a clinical sense" and then leaves "emergency".

Why? For the simple reason that he does not get enough satisfaction from his work.

In the first place, the work is very difficult, of course, because it requires, besides a good knowledge of medicine, a good reserve of physical strength. He works nights. He comes in contact with all sorts of maladies: infectious diseases, violent

psychiatric cases, etc. Very often the "emergency man" is both doctor and stretcher-bearer. You can imagine how exhausted he must feel after doing several emergency calls.

We also need skilled paramedical personnel. I don't know how fast this problem is likely to be solved. The only thing I can say is, the sooner, the better.

There must also be a strong link forged between the emergency service and science. True, we have the Society for Emergency Doctors and the Moscow Research Institute of Emergency Service. But the number of specialists in this field is still very small.

What we do need, and badly, is a special emergency clinic also serving as an organisational and scientific centre of the emergency service. The centre could develop effective therapy and provide extensive practice for students, and new methods of treatment could be evolved there.

And last but not least is the problem of technical equipment. It is true that we have special ambulance buses that make it possible to provide all kinds of on-the-spot medical assistance. But there are not enough of these buses, and their design still leaves much to be desired. Besides, they do not run smoothly enough and have no air-conditioning or heating.

In other words, our emergency service needs emergency aid.

Dr. Topoliansky's article drew a wide response from the readers of LITERATURNAYA GAZETA and from the top officials of the USSR Ministry of Public Health.

## EMERGENCY AID FOR EMERGENCY SERVICE

The editor of *Literaturnaya Gazeta* received a letter from A. Safonov, Director of the Preventive Treatment Department of the USSR Ministry of Public Health. He writes that the Ministry's Collegium has reviewed the problems raised in Dr. Topoliansky's article and taken the following decisions:—

TO BUILD new hospitals and reorganise some of the existing ones;

TO INTEGRATE the work of the emergency posts and hospitals. This measure is intended to attract more experienced doctors from hospitals to the work of first-aid stations, and enable the personnel of these stations to improve their skills and specialise;

TO INCREASE the number of resuscitation centres;

TO PROVIDE emergency stations and hospitals with the best in equipment and drugs;

TO DEVELOP new, efficient methods of diagnosing patients.

The Health Ministry also proposes to work out, in co-operation with other ministries, new models of ambulance cars and communications equipment.

The Ministry of Health has taken up the question of organising a national centre for emergency aid to help co-ordinate the work of all the emergency service organisations in the country.

## TIME TO SMILE

Both a pain...

"And what seems to be troubling you?" asked the doctor.

"Well, my children in general," said the patient. "But I came to see you about my rheumatism."

☆ ☆ ☆

Children's logic

"Don't be afraid, son," said the mother. "The doctor won't do anything to you."

"Then what did we come here for?"

☆ ☆ ☆

A practical mind

Teacher: "What is the difference between ordinary electricity and lightning?"

Pupil: "Lightning is free, while we have to pay for electricity."

☆ ☆ ☆

Double trouble

"I nearly died of fright the other day. I was walking in the woods, when suddenly I saw a snake..."

"What did you do?"

"I took a closer look and saw it was just a stick."

"What in the world were you so frightened of, then?"

"Because the stick I grabbed to hit the snake turned out to be a snake."

☆ ☆ ☆

The genuine article

"Why don't you put up a scarecrow in the garden?"

"What for? I'm home myself all day."





# SPOTLIGHT



by Vladimir POZNER

*Vladimir Pozner, whose personal column "Sputnik Spotlight" will regularly appear here, is a young journalist and a translator of English and American literature. He has travelled extensively in the Soviet Union and abroad and makes his home in Moscow.*

*Chains of freedom.* A strange metaphor, that, but I could quote several paradoxes concerning the same subject. Wasn't it G.B.S. that cantankerous Irishman, who said, "Liberty means responsibility. That is why most men dread it."

These are some of the things that came to my mind after a heated discussion, well fuelled with vodka that I had with an American visitor to Moscow. We argued back and forth about the relative merits of our two political systems without either one getting the upper hand.

At length, after much thrust and parry-thrust, my opponent came up with what he probably considered to be a crusher. It did leave me reeling, but not for the reasons he would have liked to believe.

"Well," he said, "I can call the President of the United States a S.O.B., which is a hell of a lot more than you can do. At least I am a free man."

I could have been very coy and answered that I, too, could call the President of the United States an S.O.B., but that was neither here nor there. I mean, does the fact that you can (or cannot) call your Head of State an S.O.B.

qualify you as a free (or not-free) man?

And just what is a free man? What is individual freedom?

One concept—call it the "S.O.B. concept"—states that personal freedom means just what it says: any person is free to do what he wants. Of course, this is a very broad statement and it calls for qualification, such as: as long as said person does not break the laws of his country, does not infringe on another individual's rights, does not make a public nuisance of himself, etc.

But perhaps it would be better if we kept clear of details, otherwise we shall find ourselves hopelessly bogged down in a mire of technicalities; so to say, up the judicial creek without a legal paddle.

In short, the "S.O.B. concept", if put in mathematical terms reads like this: If "I want" = "I do", then said equation represents Freedom.

Before agreeing with this seemingly flawless bit of logic, let's look back.

I think it was St. Augustine who said "Dilige et quod vis fac"—"Love and do as you will". Or perhaps St. Thomas Aquinas? It matters little enough to whom the words belong; the idea is the main thing. Let's examine it.

Just what would "love" in this context entail? Certainly, following the Ten Commandments. Also, being true in word and deed to the preachings of Christ. In other

words, such "love" would call for such self-discipline, so strict a moral code, that indeed, "do as you will", for your will, thus tempered, could never be selfish, harmful, or evil in any way.

This concept of freedom dates back to even earlier times, for instance, to the glorious legends of Ancient Greece. When Hercules returned the three Golden Apples of Hesperides to Athena, returned them of his own free will, although a bite of one could have given him eternal youth, he was exercising his *free will* under the concept of *what had to be done*, not what he personally would have liked to do.

Much later, Edmund Burke was to say, "Liberty . . . must be limited in order to be possessed."

Then, even later, G. W. F. Hegel was to formulate the concept this way: "The history of the world is none other than the progress of the consciousness of freedom."

But any way you look at it the essence remains the same: the greater the individual's freedom, the stronger the chain of self-discipline that binds him.

★ ★ ★

*Freedom not to choose?* He who acts upon the presumption that the fulfilment of his personal want is directly connected with the measure of his personal freedom is, according to the sources quoted above, a mere slave of his personal passions.

When Engels said that "freedom is realised necessity", he was

far from only putting St. Augustine's words in scientific context. Engels was formulating the Marxist credo on the subject of individual freedom. He who is really free acts on the grounds of "I must" and, needless to say, what must be done does not often coincide with what our ego would like to do.

This brings us to yet another pretty paradox—at least, such might be a superficial reaction: the greater our personal freedom, the less choice we have to act in this or that way. Let me give one example (always keeping in mind that no example is all-encompassing and perfect).

Consider the case of the French member of the Resistance who was caught by the Germans and jailed. He is on one side of the bars, the sentry on the other.

Which of the two is free? If we take the dictionary definition (in this case The Shorter Oxford English Dictionary), we read: "Not subject as a slave is to his master; enjoying personal rights and liberty of action . . . at liberty: allowed to go anywhere; not kept in confinement." Obviously, then, the sentry is free, the prisoner is not.

★ ★ ★

But what if we look at the situation differently?

One man found himself behind bars because he had no other choice *if he wanted to act as a free man*. As an individual it would have been more pleasant and certainly

less dangerous for him to stay at home, sip red wine and sleep in a warm bed, than run the risk of being shot or sent off to concentration camp and gas chamber. But if he did not want to forfeit his personal freedom, he had no choice but to fight against Fascism. *That was his duty.*

His sentry, on the other hand, opted for what suited his personal well-being, he shied away from the frightening responsibility that Freedom thrust upon him—and ceased to be a free individual at that very same moment.

I repeat that no example is perfect, and yet, this one might serve as a partial illustration of the concept opposed to the "S.O.B. concept" of freedom.

In the last analysis, the fact that you can or cannot call someone a S.O.B., can or cannot have your critical letter printed in a newspaper (I would still like to hear of a printed letter that ever changed anything), does not make you a free man.

If you realise the necessity of your every act, if you can draw a clear line between what you want and what you must as a human being, then, I think, you can consider yourself a free man in the noble sense of the word.

That, at least, is the way I see it, although I am far from trying to push my viewpoint down another's throat: every man decides for himself what personal freedom means to him.

Then, later, history judges him



from the magazine DEKORATIVNOYE ISKUSSTVO v SSSR  
(Decorative Art in the USSR)

## Monuments of Masses

by Anatoli STRIGALOV



Shortly after the 1917 Revolution in Russia, when the Civil War was raging and the country was in the grip of famine and economic chaos, the Soviet leaders met artists, sculptors and poets to discuss the new forms art was to assume and the role it should play in the life of the masses.

On April 12, 1918, the Council of People's Commissars adopted a decree, "On Monuments of the Republic". Not long before, Lenin had met Anatoli Lunacharsky, the People's Commissar for Education, and had a long chat with him.

"Remember how, in his 'Civitas solis', Tommaso Campanella describes frescoes on the walls of his fantastic Socialist city?" Lenin had asked. "The frescoes were meant to serve as visual aids in natural sciences and history, and to instill social awareness in the citizens, thus playing a part in the education and up-bringing of the new generations.

"It seems to me that this is not so naïve, after all. I think we could adopt this system, with certain alterations. I'd call this monumental propaganda.

"Our climate is not suitable for frescoes . . . That's why I am talking about sculptors and poets. I consider monuments—busts and figures and maybe bas-reliefs and sculptural groups—more important than inscriptions."

The decree was put into action without delay. Sergei Konenkov, who was Chairman of the Moscow Union of Sculptors, writes in his book *The Earth and People*, "I was invited to the Kremlin to attend a session of the Council of People's Commissars,

where I was to speak about new monuments.

"I spoke very briefly, and in conclusion read out a list of revolutionary and public figures to whom monuments were to be erected.

"After this the meeting commented on my report. Most of the speakers suggested additions to the list, which in its final form included such glorious names as Spartacus, Robespierre, Jaurès and Garibaldi.

"Lenin wanted to know how much each monument would cost and said, 'Please, write down in the protocol: each sculptor, regardless of his name, must be given eight thousand roubles within three days.' Then followed his usual phrase, 'The question is closed,' which he said very warmly and smiled approvingly."

It was very important to adopt the right approach to monuments erected in honour of the czars and their courtiers. The more reactionary and artistically mediocre ones were to be removed, while others were to be altered and adapted to new aims.

The removal of a monument can be just as significant as its erection. The North American Revolution swept away monuments to English kings and the French Revolution removed statues of the kings of France, while the Paris Commune removed the Colonne Vendôme, the dynastic symbol of the Bonapartes. Every year, on the 14th of July, the people of France "destroy the Bastille", the act symbolising the French Revolution.

The destruction of some of the monuments to Russian czars was



Moscow, August 3, 1919. Removal of the monument to Czar Alexander III.



*Lenin lays the foundation stone for monument to Karl Marx in Sverdlov Square, Moscow; May, 1920.*

not aimed at inflaming destructive instincts. Quite the opposite. They were restrained acts of the Revolution, and were carried out in an efficient and businesslike manner.

Never before had so many new sculptures and statues been designed as in the early days of the revolution. Bold ideas were conceived and carried out. Soviet monumental art inherited many traditional forms and trends, and evolved a style of its own.

Big cities were lavishly decorated during national holidays. It is noteworthy that the decorative style of those days (Red Square in Moscow and the Field of Mars in Leningrad) has been essentially preserved and has greatly influenced the style of

our urban architecture over the years.

True, most of the decorative monuments erected in those days were temporary rather than permanent, and many of them served only as models for the future. Times were hard and possibilities were still very limited. Lenin cautioned against the use of costly marble, granite and gold. "We have yet to be modest," he said.

Nevertheless, progress was being made in decorative architecture which was developing side by side with monumental art. The idea was to change quickly the appearance of Soviet cities, give them a new aspect, even if only for the short time of a

*Continued on Page 35*



*Memorial plaque to the fallen in the Revolution, by Sergei Kanenkov, erected for the first anniversary of the October Revolution in the wall of Senate Tower, Moscow Kremlin. The words written in the sun's rays read: "The Revolution of October 1917". On the banner at the bottom are the words: "To the fallen in the struggle for peace and brotherhood between the nations".*

*D. Gaspov's  
Constitution Obelisk  
in Soviet Square,  
1918-1919.*



*Above: M. Imkhan-  
itsky's plaster-cast  
to Merat;  
Moscow, 1918.*

*Top right: Vera  
Mukhina's bronze  
statue, "Flame of the  
Revolution";  
1921-1923*

*Right: Monument to  
Timiryazev (botanist,  
1843-1920) by Sergei  
Merkurov; 1923.*



national holiday or a celebration.

Shortages of material were devastating. Even clay and gypsum were not always available. Architects and sculptors used coloured cement, cement with iron dust, iron and concrete, cast iron. Significantly, it was in those days that the first "spatial structures" were designed.

Those were days of experiment and search for new forms and new means of artistic expression, which sometimes led to excesses.

Some of the temporary monuments were later removed or lost their shape

because of the poor quality of the materials they were made of. However, many of them continued to live in the memory of the people.

This early period in Soviet monumental art not only set the course for its subsequent development, but also exerted a great influence on art outside the Soviet Union. Some of the outstanding monuments and sculptures which many countries are proud of (Mexico, for example) undoubtedly stem from the revolutionary art born in the turbulent events of the Russian Revolution.



Cement memorial plaque on wall of  
Rozhdestvensky Convent, Moscow.  
1918.

# Ranevskaya

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## -brilliant

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## tragic

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## actress'

*That was how Franklin D. Roosevelt described Faina Ranevskaya in 1944, after seeing the Soviet film, "The Dream". This article is adapted from an appraisal by Tatyana TESS, writing in IZVESTIA.*



Faina Ranevskaya, People's Artist of the USSR.

Faina Ranevskaya's amazing and many-sided talent is mirrored by the admiration audiences show for her, as in every new role she unfailingly presents an unexpected aspect of human life, a whole live human soul with its light and shade, its pain, eccentricities and ambitions, its mirth and sadness.

The women she portrays in her astonishing range of roles have nothing in common in appearance, character or experience of life, and it is hard to believe that these characters have been created by one and the same person. But each sparkles with the bewitching light of her superb talent.

Her ability to impersonate seems limitless. It is beyond me to grasp, for instance, how Ranevskaya, who is totally indifferent to and ignorant of gambling games, manages to convey with such diabolical completeness the feeling of the flames devouring the soul of the frantic, paralysed old woman in Dostoevsky's "The Gambler".

As the footmen push her in her wheelchair to the roulette table, her senile body, doomed as it is to immobility, seems to become so galvanised with the craving for life that the spectator almost feels the burning flow of passions reaching him from the stage.

Brilliant as such accomplishments are, Ranevskaya never stereotypes them. The hot-tempered old Russian lady and the measured, majestic old Spanish woman in Casona's "The Trees Die Standing" have hardly one trait in common, while she builds

a completely new character in J. Patrick's "The Strange Mrs. Savage." Here Ranevskaya's heroine is defenceless in the mad world of greed around her, and in which her noble moral standards seem so abnormal that her relatives thrust her into a mental hospital.

Yet there is a common element in her interpretations—the element of endless pity for her heroines, pity for the human being whose hopes are crushed, pity reaching out to the cry for aid.

Perhaps the reader is surprised that in speaking of a famous comedienne, I should eulogise first her great talent for straight drama. But after all, the rare combination of two so very different gifts in one person is surely worthy of comment. Ranevskaya's comic roles have so often evoked tears of laughter, just as her dramatic acting has brought tears of compassion.

She has a strong hatred of evil, still so much alive in the world. I recall a part she played as the speculator in Bil-Belotserkovsky's "The Storm"—a part as brief and to the point as the impact of a bullet.

Her hands changed shape, becoming swollen and rapacious. That figure, ridiculous and offensive, with down-at-heel felt boots and someone else's spangled evening dress pulled on to the fat body, expressed the very soul of cupidity, degradation and spite. The eyes flashed cruelty, cunning and the torment of a trapped animal.

The character was sculpted out mercilessly, in bold relief, with an



Still from "The Dream". Faina Ranevskaya in the role of Rosa Skorokhor with A. Kislyakov as her son, engineer Lazar.

unerring feeling for the times, a strong sense of the purifying storm of the revolution.

I could go on and on about her various roles, but I would rather touch upon an area which I feel is extremely important in acting—the player's own inner world.

Talent and personality are inseparable. Some dramatic talents are so imperious that they reduce other characters on the stage to a mere backdrop for their own brilliance.

Is it selfishness, or a striving to be always first? I think the reason is wider than this, and includes a kind of indifference to the life

and fate of other people.

The true actor is always generous and unselfish, and expects these qualities to be reciprocated. The true actor needs a constant return current of as high a tension as his own. Responsive teamwork on the stage is vital to Ranevskaya, and when she finds it she bubbles exultantly and produces a sparkling display of new gems.

What is so fascinating about Ranevskaya's performances is not her improvisation, although she likes to use this word. As I see it, improvisation relies too much on chance, whereas Ranevskaya's

strength lies in her interpretations being a natural outcome of continual effort, the enrichment of character, the laying on of hue upon hue. Her palette is not merely rich: I would call it intellectual.

Apparently effortless impersonation is usually the result of long-sustained hard effort—as someone said, inspiration is a rare visitor and should find people at work.

Ranevskaya gladly plays the parts of eccentrics, radiating goodwill and superb humour. Indeed, her own eccentricities could make a good story. She leaves a trail of

lost articles in her wake—wherever she goes she drops gloves and spectacles, leaves bandbags on street benches and purses in grocery stores, and there's no counting her head-scarves that have "gone with the wind". She has mislaid enough things to fill a lost property office.

She is absent-minded, and frequently drops a brick by congratulating someone prematurely on some distinction which is to be conferred, or by solicitously inquiring from a childless woman about her daughter's health.

But the moment she is on stage, she changes completely and is



Screen test for the role of Efrasiya in Sergei Eisenstein's classic film of "Ivan the Terrible".





*Faina Ranevskaya as the speculator and A. Zubov as the Cheka chief in the Mossviet Theatre production of Bū-Belotserkovsky's "The Storm".*

collected and concentrated. This veteran actress prepares for every performance just as she did for her first appearance behind the footlights.

On days she is playing, she never leaves the house, receives no guests and ignores the telephone—all just to preserve in her soul the tender shoots which are bound to break into captivating blossom on stage.

She arrives at the theatre before any of the other actors, when the dressing-rooms are still empty. I once saw her walking through the theatre yard towards the stage door: a thoughtful, grey-haired woman, with her overcoat buttoned awkwardly, quite oblivious to all around her, no doubt completely wrapped in the fairy-tale world

which was beginning to breathe in her soul.

Audiences love her, and always want to meet her. Dozens of strangers greet her in the street, people are always coming up to her at the cinema, at the chemist's, in the concert hall, in museums and post offices—and all tell her how they enjoy her acting and how much they look forward to seeing her again on screen or stage.

She has so many admirers. Nothing so much gives the artist confidence or inspiration as the feeling of being needed and loved—it helps in "difficult moments".

The actor has many such moments. Happiness never comes easily in art. And the more difficult it is, the dearer.



*In the title role of J. Patrick's "The Strange Mrs. Savage", with A. Kansonvsky as Judge Samuel.*



*At a reception held by the Russian Theatrical Society at the Actors' Club, Moscow, in honour of visiting British actors. From left to right: Sergei Obraztsov, Faina Ranevskaya, Paul Scofield, Maya Plisetskaya and Pavel Markov.*



As Lyalya in the film  
*The Abandoned  
Child*.



As Antonida Vasilyevna in the stage  
version of Dostoevsky's *"The  
Gambler"*.

**W**E asked the officers to tell us what made their job different from others.

Major Artamoshin said that their specialties, medicine or physiology, gave little idea of the scope of knowledge required. What was essential was familiarity with the way a man reacted physically under the stress of an extremely adverse environment.

Major Uskov said they were also required to know the elements of biology, zoology, climatology and general geography, and to be expert parachutists. They had to be able to survive in the taiga (the primeval forest and swamp regions of Siberia), in ice and frost and in the desert, so that they could test new theories of survival, new equipment, emergency stocks and clothing.

Last year (said Major Artamoshin) they spent a few weeks in the taiga after being dropped from a helicopter. First they set up a field laboratory and a kitchen—all they had to remind them of civilization.

Following their usual practice, they formed into groups, each going its own way and with its own particular work to do. One had to survive without equipment or rations; another tested standard emergency flying gear; another tested a new boat, a knife or some other equipment.

His own group got away to a flying start. They worked on the idea that anyone landing by accident in a forest must try to find open ground, where he can set up signs to be seen by rescue planes. Morale improves in the open, too.

*People whose lives are in danger when they are victims of air accidents or shipwrecks, or who are lost in remote and dangerous areas, need help while they are being rescued.*

*Here is an interview with members of a "survival laboratory"—Air Force medical men, Majors Victor Artamoshin, Vladimir Uskov and Alec Mnatsikanyan.*

# THE ART AND SCIENCE OF

by Vsevolod ARSENYEV

*condensed from the youth daily  
KOMSOMOLSKAYA PRAVDA*

But in the taiga all the open ground is either burnt-out clearings, where a man feels worse than when he is in the forest, or it is rivers. A river seems to be best, as it provides water, fish and shellfish. In addition, it affords good visibility for signals.

So Artamoshin's group set out in search of a small river. They had standard flying equipment, a parachute and emergency reserves. "On that first day we made our first mistake," he recalled. "We walked for too long, and made camp only when dusk was falling."

It was quite dark before the hut was ready, and to make things worse the night was frosty, so the men got no sleep and saw the night through huddled together, gritting their teeth and keeping as warm as possible beside their fire.

"But next day we were smarter, and we made camp well in advance of nightfall," he went on. "We cut enough grass to make mattresses and ripped open a parachute to cover the hut, making a clean and comfortable lodging. Another parachute provided a blanket, so we had a good night's sleep—better than at home, in fact!

"All I had in the way of food was my meagre ration, providing 500 calories a day—a fifth of the normal ration, and a bit less than an infant needs.

"I had to make believe I had got into the taiga in the worst season, with nothing edible around. That was the first part of the experiment.

"Next, as planned, we began to live on berries, nuts, mushrooms—anything we could find.

# SURVIVAL

"There was an angler among us. We didn't risk any jokes about angling—it could have meant nothing to eat. The angler caught small fish to use as bait, using the simple fishing tackle provided in the survival kit, and with it he caught larger fish. We had fish soup three times!

"After the test was over, we picked an open area and waited for the helicopter. It dropped a cable and took us aboard one after the other.

"We finished as we began, with a medical check. It was found that for every day of our stay in the taiga we had each lost an average of one kilogram (2.2lb.) of weight."

*Komsomolskaya Pravda* asked about the risks.

Major Artamoshin said there was certainly some risk in the tests, but it was not an end in itself, and it was not planned.

"But risk only adds a flavour, a bracing tension to our work," he said. "Alec could give you a good example: he'll tell you about his bathing experience."

Major Mnatsikanyan said, "We were testing equipment to lift a man from the water straight into the air. I was the 'victim'. I waited in my diving suit for the helicopter, and it dropped a cable with a toggle. I caught the cable, fastened the toggle and waited for the lift. Other squad members in a patrol boat were watching, their cine camera whirring. . . . My helmet flap was raised, so splashes of water blurred my vision, but it made breathing easier. Suddenly, the helicopter dived slightly and went flying over the water, hauling me with it.

"I lost balance and I was left hanging upside-down. The helicopter flew on and on, dipping me in and out of the water, but mostly just dragging me through it. I could hardly breathe, for the water was getting into my lungs. I could only think of one thing: This is the end, and what a silly end it is!

"When I saw all this on film later, it took only a few seconds on the screen. A comical figure leaving a foamy trail on the water. . . . But my mates told me that our chief, when he at last saw me regain balance in mid-air over the sea, burst into tears."

Asked to explain how the tests were assessed, and whether the psychological consequences of accidents could be simulated, Victor Artamoshin said this was the most difficult question.

To be frank, he said, there was no confirming or disproving the famous statements by Alain Bombard\*, one of which was, "Victims of legendary shipwrecks, who lost your lives prematurely—I know that you were not killed by the sea, by hunger or by thirst! Balancing on the waves to the moaning cries of seagulls, you died of fear."

Bombard also said, "It thus became obvious to me that a multitude of shipwreck victims die long before the physical or psychological conditions become really fatal. How can one fight the despair which kills man more surely and more quickly

\*In 1952, Dr. Bombard proved his theory that a man could live entirely from the sea, by crossing the Atlantic in a 15ft dinghy without provisions. The voyage took 65 days.

than any physical privation does?"

Alec put in, "Bombard merely posed the question. An answer was provided by his own epic, an example of service to mankind and science.

"But Bombard's trip was not an absolutely pure experiment. Basically it lacked the principal element confronting man in an accident—the element of unexpectedness and hopelessness.

"Bombard found himself in the midst of the ocean of his own volition. He had prepared for his trip, and visualised, however roughly, the difficulties he might encounter.

"That by no means detracts from the merits of the French doctor, but it brings us nowhere near the answer to the question: How can one simulate post-accident conditions which set in when a man falls victim to stress?"

"Just what is 'stress'?" our interviewer asked.

Vladimir Uskov answered, "'Stress' simply means tension. Its worst form is shock. Briefly, it is a physical reaction to the action of an intense irritant—an air crash, for instance, a shipwreck, a fire, or any other such happening. In these conditions, it results in unwarranted, inadequate actions, which seem preposterous to the outsider."

Victor Artamoshin commented that doctors had only a very rough idea of the human body's possible reaction to a given situation. A man might turn apathetic, lose his memory, or suffer even graver consequences.

In such circumstances the victim could hardly be expected to take

action to save his life. His only hope would be to be rescued.

"But our job is to teach people to survive without rescuers," he went on. "We strive to find the limits of man's physiological and psychological endurance. This is an extremely challenging job.

"And we make our demands more and more rigorous as we go on. We badly need answers in order fully to comprehend the mechanics of human behaviour, to develop rescue techniques, and to find out the least time needed for a rescue."

The interviewer asked, "Are there cases in which 'stress' mobilises will-power and stimulates, instead of killing thirst for life? Has the salutary 'feared' ever saved a man in an apparently hopeless position or, if it hasn't, do you think it would be possible?"

Alec replied, "That may lead us too far into medical technicalities. But the question is interesting. It is extremely difficult, but not impossible, to define the end point of 'stress' action which brings psychological reactions back to normal. But in some verified cases 'stress' has saved a man."

Victor said he found it natural that a shock might unexpectedly "save" a man. In such cases, those who were saved had lived hard lives and were steeled morally and physically.

Alec said, "I have seen a lot, but I will tell you now of something that was simply staggering.

"A pilot was catapulting from a crashing plane at night. His plane hit the taiga, and for a moment a pillar of flame lit up his tiny figure hanging

under the dome of his parachute. Then darkness fell again.

"The pilot was hanging from a tree, the parachute lines caught in the branches. He was hanging only a few feet above the ground.

"His face was bruised and his arms fractured, but his physical pain was less than his horror: he had an oxygen mask on, and the oxygen was running out—that was what seemed to mean the end to him. He took a feverish breath. Spasms gripped his throat as if he had begun to choke.

"Then a plane appeared high in the sky. Before long it came so close that its engines seemed to be roaring right above the treetops. Apparently it was searching for the man.

"Breathing was becoming more difficult. The pilot tried to move his mask aside by turning his head. He rubbed his chin against his shoulder—but it was no use. The mask, well fixed to his head, would not budge an inch. Then he began to gnaw at the rubber gag in his mouth.

"Seven hours later the pilot was found. All his strength spent, he was hanging in the tree as if in a kind of sleep. His fractured arms were dangling like loose ropes. Lying night at his feet was his mask—he had managed to throw it off!"

The interviewer asked, "Have any of you ever experienced a semblance of 'stress'?"

"I should say 'No,'" said Victor "but we have felt a certain strain on our nerves. We know that no danger awaits us at all; we shall go bungry, or be left in the sun with only a drop of water, for only a week or

so and then it will all end and we shall enjoy lemonade and a steak.

"However, for some reason we get irritable and angry, so we quarrel over trifles."

Vladimir said, "Last year we staged an experiment in the ocean to test rescue equipment and rations and to do some more research. It was an extremely useful job. In this age of booming aviation and astronautics, crash landings on the oceans in the equatorial zones are quite likely.

"What distinguished these experiments from others was that the ship left us, the tests lasted much longer than usual, and there were many 'acting' characters. Volunteer oceanologists from the ship's crew helped us. They joined with pleasure—the job held out a promise of novelty and thrill . . . so they thought.

"We were rocking on the waves aboard a rescue whaleboat and an inflatable raft. The raft gives you a better feeling than the boat does, for it has a canopy so that the sun is not so scorching, yet you feel too cramped and can't turn around or straighten your back.

"Sensickness, heat and thirst were doing their job. Irritation produced some bickering. When the ship radioed to say that we would have to wait for beer for a few more days (a joke by the chief of the expedition) the volunteers protested strongly, to say the least.

"Later, they gave a picture of their inner state at the time. Rough notes they had made during the experiment helped to reproduce

the emotional background with accuracy.

"But apathy gave us more trouble than irritability. It crept up on us unnoticed.

"At first we watched with interest the approaching sharks, whales or swordfish, and humorous remarks—not without a tinge of nervousness—were plentiful.

"But after a while all our emotions were spent—we felt too hot, thirsty and seasick. Fish or sea monsters swimming past left us totally indifferent. Swordfish? A lot we cared! What difference did it make if it rammed us and we went to the bottom? That's what our faces seemed to suggest."

Victor said that despite everything, he for one saw no possibility of experimenting with "stress" now or in the future. As a minimum, it would require the involuntary participation of a man in an unplanned accident.

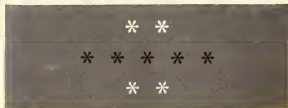
All that could be done was to make a careful study of experiences recorded by others in some place, at some time—not exactly the best material for a researcher.

Alec was asked to describe the ultimate aims of the laboratory. He said, "First I will say a few words about the by-products of our work. Among the foreign books on the subject of our research, we came on an interesting American work, *The Survival Book*.

"We translated it and it appeared in Russian in 1965. The book describes components of rescue work and survival as recorded all over the world, and offers advice on how to build a fire and keep it going, how and where to find water, how to build a shelter of bamboo, ice or a parachute . . .

"The book is intended for pilots, but most of the useful recommendations it contains hold good also for geologists, topographers, mountain-climbers, fishermen and hunters—for every 'roaming' profession in the world.

"The ultimate aim of our laboratory is to offer exhaustive recommendations to all who may find themselves in distress, to design reliable equipment for their use, and to help them feel that they are strong enough to survive."



## WEATHER FACTS

The most arid places in the world are generally considered to be the deserts of Wadi Halfa in the Sudan and Atacama in Chile. Whereas in some desert areas the annual rainfall is just one millimetre, Wadi Halfa gets this amount of moisture over a period of three years.

\* \* \*

The world's hottest spot is near Tripoli. Here, on September 13, 1922, the mercury climbed to 136.4 degrees Fahrenheit, generally accepted as the world's highest temperature recorded in standard conditions.

\* \* \*

The lowest recorded temperature was registered at the Vostok station in the Antarctic in 1960: minus 126.94 degrees Fahrenheit.

\* \* \*

## Was the Arctic always so cold?

*From the newspaper KOMMUNIST TAJIKISTANA*

What do the words "Arctic climate" mean to you? Probably nothing more than a shiver. And the Arctic itself suggests hundreds of miles of uninhabited wasteland. Yet it was not always like this.

Archaeologists have discovered traces of a Stone Age settlement on the Novosibirsk Islands (New Siberian Islands), which lie well within the Arctic Circle. They have found bone implements and arrowheads, as well as needles and axes skillfully fashioned from mammoth tusks.

Spitzbergen was once inhabited, too. Proof of this can be seen in the fragments of prehistoric cliff drawings found near the present-day settlement of Ny Alesund. On the rock face are well-preserved incised outlines of whales and deer. And the forbidding Arctic climate? A whole collection of fossilised plants dating from the Tertiary Period indicates that even winter was once very mild there.



## LITTLE GREEN MEN FRIENDS OR FOES?

*condensed from the newspaper LITERATURNAYA GAZETA*



*British scientists recently registered unusual radio signals coming from outer space. Someone suggested that the signals could have been sent by intelligent beings of another civilization: they were immediately dubbed "little green men" by the Press. Professor A. Hewish, of Cambridge, who was in charge of the group receiving the signals, has confessed that he and his colleagues were shaken by the phenomenon. In an interview with an Italian journalist, Professor Hewish maintained that even if it were possible, it would be sheer folly for earth to reply to the signals. Why attract the attention of a civilization we know nothing about, and can only assume is more powerful and developed than our own?*

*LITERATURNAYA GAZETA asked Dr. Gustav Naan, a Soviet scientist, to comment on the problem.*

I told a friend of mine about the "little green men" and asked her if she thought it possible for an earthman to fall in love with a little green woman.

"To fall in love, certainly. But could he love her?"

However, for the time being there is no use discussing the fascinating question of whether these problematical beings have any resemblance to us at all, whether they are capable of love, and so on. After all, love is the highest expression of man's being.

So let us discuss the question on a more general plane: should we seek contacts with another civilization, and is there any hope of understanding between us? These two questions are central to the problem of outer space contacts.

From many scientific considerations, it follows that the chance of coming in contact with beings

even stupider than we are is slight. It is much more likely that the civilization has reached a higher level than mankind.

If so, there are three possible attitudes the superior beings could take in their relations with us.

### 1. Interest and understanding

Ideally, space beings would take a friendly interest in us. They could provide us with invaluable information—scientific, technical artistic, etc.—and warn us against ridiculous and fatal errors; say, neglect of promising directions in science, or steps that could lead to contamination of our physical environment or even death.

But even this ideal has its dangers. One is the danger of learning too much from mistakes made by others. Effective learning, it is commonly believed, is based on

one's own experience. But mankind has not even profited enough from its own history.

Another danger: a rose without thorns is not quite a rose. Effortless progress could lead to a loss of interest in life and learning, in technology and art. Rabbits are said to develop normally when they are chased by wolves. Human beings are hounded by difficulties.

### 2. Understanding without interest

Space beings could treat human beings benevolently, but with indifference. Mortifying for us, but quite possible.

If they are millennia, if not more, ahead of us in terms of development, they are likely to treat us somewhat in the way we treat ants, in which we regard the possession of an intellect as highly unlikely. What could we teach ants or warn them about?

### 3. Interest without understanding

Beings from outer space could take an interest in us, but this interest could be purely pragmatic; say, gastronomical. This situation would be the most trying of all. Man has to overcome fear of outer space contacts without knowing what is in store. For this reason, the third possibility merits special consideration.

If some extra-terrestrial civilization possesses enough technological potential to detect us, we shall never be able to hide. What is more important, man constantly expands his spheres of communication,

aware that it is a guarantee of his evolution. Man has always striven to overcome all isolation, knowing that in the final analysis isolation leads to stagnation.

Sooner or later man must overcome the present state of cosmic isolation. We are already on the road. The greater the problematical beings differ from us, the more valuable and thought-provoking the contacts. Let them be little green men—why not?

Once we establish cosmic contacts we shall in all probability deal with highly-developed beings, and the contacts will help us to see the place of mankind on the stairway of cosmic evolution.

Things look different when viewed from a great distance. Many of our accepted ideas, which arise from everyday or historical experience, are absurd from the cosmic point of view, and vice versa. One of the benefits of discussing space prospects is that it forces us to take a broader view of things.

Specifically, mankind must take a broader view of its place in the process of evolution. We are the product of a certain social, biological and cosmic evolution. The inorganic stage of cosmic evolution led to the biological stage, which, in its turn, has led to the social.

We do not know what will come next. Cosmic evolution may, strictly speaking, have any number of phases. To think that our stage of evolution, and all that is associated with the earth and humanity, is absolutely superior to all other stages, and

that the social stage is the end of the process, is a sheer illusion.

Above all, humanity strives for self-preservation and is right to do so. So did the ichthyosauruses, but if they had survived men would never have appeared. The ichthyosauruses, if they had remained the final stage of evolution, would have been doomed to eternal stagnation. But nature never tolerates stagnation.

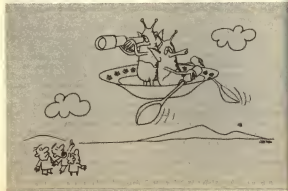
In short, trying to escape from knowledge is futile: if a highly-developed cosmic civilization makes up its mind to contact us it will do so, no matter how hard we try to escape such contacts. We shall learn much, and possibly beings from outer space will convince man of what I am quite certain—that mankind is destined to live a long life, a life of progress.

The time allotted to us on the cosmic scale has not run out. We are still so imperfect, so far from having exhausted the potential of the social stage of evolution.

There are many other hopeful prospects. Why can't we count on mutual understanding with beings from other planets? Regrettably, on our own planet we have trouble reaching it among ourselves. We have so many barriers: social, racial, age, etc., major and minor.

However, in spite of everything, mankind strives for closer relations, pence and mutual understanding. Meeting with extra-terrestrial civilization and subsequent realisation of our cosmic position will undoubtedly foster a sense of unity in mankind.

Surely any risk is worth taking for such a cause!




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# THE

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# WORLD'S

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# BIGGEST

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# BANK



*Although its authorised capital of 1,500 million roubles is comparatively small, the scale of operations of the USSR State Bank makes it the biggest in the world. Its payments turnover exceeds one million million roubles, and it makes short-term loans exceeding 600,000 million roubles a year. The chairman of the board of management holds ministerial rank.*

*In response to a request from Richard Austin-Cooper, of Trinity Road, Rayleigh, Essex (England), who asked us to tell him something about banking in the USSR, we sought an article from two Soviet experts who have written on the subject in Pravda newspaper, the magazine Novy Mir (New World), and other publications. They are Victor BELKIN, Doctor of Economics, and Victor IVANTER, Master of Economics.*

Many people know a lot about lasers, masers, cosmic rays, heart transplantation and so on, but we find the same people often have very vague ideas on banking.

A bank is an establishment for the custody and disbursement of money. That is one function of any bank, including the USSR State Bank. But here are some of the more important spheres of activity of our bank—

**Elaboration of the credit and cash plan.** This is a component part of the general programme of the Soviet economic development for a given period. The bank works in close co-operation with the USSR State Planning Committee (Gosplan) and the Ministry of Finance.

**Organisation of the money in circulation in the country.** The bank, acting on the authorisation of the government, issues and recalls from circulation banknotes and coins. It makes use of the temporary idle funds of both organisations and private citizens in the following ways—

*Granting credits to government enterprises and organisations.*

*Capital investment in agriculture and consumer co-operatives.*

*Cash operations under the State budget.*

*Settling international accounts, operations with foreign currency, gold and other precious metals.*

The USSR State Bank comprises

15 republican offices (one in each of the Union Republics), 150 territorial, regional and town offices, almost 4,000 smaller departments and agencies, and 75,000 savings banks.

The bank's main clients are State and co-operative enterprises, of which there are nearly one million. Between them, they operate four-and-a-half million accounts for various purposes—current accounts, credit accounts, budget accounts, and so on. There are more than 60 million individual savings bank accounts, totalling 25,000 million roubles, and almost 400,000 current accounts of State enterprises.

Almost seven million transactions are carried out by the various agencies of the bank each day by its 250,000-strong staff.

The liabilities of the USSR State Bank are determined by its 1,500 million roubles authorised capital and the reserve capital deriving from its profits. The bank is self-supporting in that it covers its own expenses from interest on loans.

As such, it is not responsible for the obligations of the Soviet Government, and in the same way, with one important exception, the Government has no responsibility for the bank's obligations. The exception is laid down in the USSR State Bank Statute: the Government does guarantee the personal savings accounts of citizens.

#### Circulation of money

As the Soviet financial system is based on the unity of monetary transactions, all the government,

co-operative and public organisations and enterprises are obliged to keep their funds, and those credited to them by other agencies, in State Bank accounts. Actual cash funds are comparatively small, and are meant to be used for urgent cash payments. The bank is the only bank of issue and is the cash centre, so it always knows how much money is circulating.

While institutions must handle their money in this way, the general population is free to keep its money where it wishes.

The bank is in a position to know the facts about each social group's economic activities and incomes, including, besides wages and salaries, amounts received as pensions, students' allowances, grants, fees, royalties and so on. The bank also knows how much money the population spends on food, clothing and other items, as it collects the receipts of trading establishments every day.

How much is spent on services, rent, transport, cinemas, even fines imposed for traffic offences—all this knowledge comes to the bank in the same way.

Once we know the amount of the people's expenditure and income, it is a simple matter to calculate effective demand. Because it knows the extent of stocks in the stores, since it supplied them with the credit for their purchase, the bank can ascertain the pattern of demand in general and in different areas.

Growth of personal incomes is taken into account in dealing with problems of money circulation. Under

the current five-year plan (1966-70), for instance, it is expected that the average cash earnings of factory and office workers, excluding social benefit payments, will rise by 20.5 per cent.

Collective farmers can be expected to fare even better, so that the amount of currency in the hands of the population and in circulation will grow steadily.

The bank, which supplies the cash, keeps the account. Taking the amount of cash provided in 1958 as 100, the 1966 figures were: wages and salaries, 170; payment for agricultural produce bought directly from collective farmers, 192; pensions and grants, 179.

Normal money circulation requires not only the supplying of money, but arrangements must be made for its return to the bank. Together with retail trade, transport, and service establishments, the *savings* of the people provide a channel for this.

In 1959-66, trade turnover in average terms grew in volume by 70 per cent, while the total amount of savings showed a 160 per cent rise.

Incidentally, this ratio indicates that things are not always smooth in the complex system of planned national economy. Cash incomes in the countryside have increased considerably, but trade turnover there is not growing as rapidly as it should. This indicates the need to encourage enterprises to turn out goods for which there is maximum demand, and to pay more attention to market conditions and other problems associated with economic

reform. (Later we shall discuss the reform and the positive role played by the bank in setting up economic guide-lines.)

State Bank data show that the average amount of individual savings is 377 roubles. The bank pays 2 per cent interest on deposits repayable on demand, and 3 per cent on fixed deposits with a six months minimum.

On the instructions of depositors, savings banks conduct transactions by written order to pay house rent and various utility services. Each year holidaymakers and travellers have traveller's cheques issued to them totalling 1,500 million roubles—equal to the authorised capital of the bank.

In future, the scope of written order payments will be extended, as a factor in stable money circulation.

#### Clearing operations

All Soviet enterprises and organisations settle their accounts through the State Bank. Whenever goods or services are sold by one enterprise to another, a State Bank office transfers a corresponding amount from the buyer's to the seller's account.

However, the bank not only registers but controls economic relations and this function has been legally certified.

State Bank officials are concerned first of all with the observance of terms of payments and contracts. The supplier is obliged to deliver the goods, of stipulated quality and quantity, within the stipulated period, while the customer's duty is to pay in good time, in full, and at the required

price. If one party violates the contract, the bank imposes fines and forfeits in favour of the party which has suffered loss, and of the State. These are *fiscal sanctions*.

In addition, the bank uses a wide variety of *economic* measures to cover such transactions. If a supplier turns out low-quality goods, the bank, acting in agreement with the customer, arranges for payments to be made only after the quality and quantity of goods have been duly accepted. Customers failing to pay in time are compelled to pay in advance by letter of credit.

The settlement of accounts by the bank makes for more rapid economic turnover.

There is no need to dwell at length on this aspect of the bank, since clearing operations are essentially the same all over the world.

#### Credits

Unlike the United States, where the private sector is predominant in the economy, and Britain and France, where the share of the public sector is less than one-third, in the USSR all industry, construction, transport, and trade and agriculture (to a great extent) are run by the State.

The State budget of the USSR is much more closely connected with material production than the budgets and production of the other countries mentioned. That is why the supplying of credit for the national economy is the most important function of the State Bank, its basis being short-term loans granted for not more than one year. The annual amount of

short-term credits—600,000 million—is almost five times larger than the country's State budget.

State and co-operative enterprises make wide use of these loans to cover the inevitable time-lag between expenditures and receipts. For instance, in the cotton industry the raw materials are received in the autumn, while receipts from the sale of fabrics come in all the year round. So the textile mills buy cotton in the autumn, using a loan to be repaid within the next year.

A mill cannot receive raw materials on credit from an agricultural enterprise (collective or State farm) since reciprocal (commercial) credit is not permitted by the law, and direct bank credit is used instead.

Short-term credits are not limited to the issue of loans against seasonal stocks. The bank also makes a sizeable contribution to the formation of reserves of raw materials and other supplies by non-seasonal enterprises. It grants loans against payment documents during the sale and shipment of goods.

In recent years bank loans have been issued to consumer enterprises to pay for the goods they have ordered.

Bank credit today accounts for more than 30 per cent of circulating assets in agriculture, almost 50 per cent in industry, and more than 60 per cent in trade.

It would be wrong to describe bank credit operations simply as the granting of loans. In issuing such credits, the State Bank pursues a definite policy aimed at raising the

efficiency and quality of production.

In the first place, the Bank grants loans only for rational purposes. Secondly, a loan must have sufficient material security. Thirdly, the bank charges interest at the rate of 6 per cent per annum on short-term loans.

If an enterprise shows a poor performance, and does not meet its obligations to the budget and the bank, it is subject to a special procedure of credit and settling of accounts. The bank raises the interest rate, refuses money for current needs, and demands additional security. Well-run enterprises, on the other hand, are encouraged by being given certain privileges.

These tendencies have been brought into relief during the economic reform. Bank credit for expansion and renewal of capital assets is playing an ever-growing role in the development of the economy. Before the reform, the bank granted loans for the introduction of new technical facilities repayable within three years, and only highly profitable enterprises could afford to accept such credits. Today, the repayment period has been extended to five years, considerably increasing the number of the bank's customers.

#### Incentive to profit

The USSR State Bank has considerable funds for the granting of credits. Besides the bank's own money, these include the temporarily free funds of State enterprises

and organisations on payment and current accounts, the funds of other credit organisations, such as savings-banks, State insurance agencies, and funds of the State budget before they are used for the purposes stated in the budget.

When we say that the bank is responsible for the security of funds placed at its disposal we do not mean preserving them from embezzlement, which goes without saying, but it means ensuring that the bank's customers repay loans in full and in good time.

Keeping of loan funds is only part of the problem. No less difficult is the task of ensuring the rational use of funds.

Being a cost-accounting concern, the bank seeks to secure the maximum profit. The profit is basically the difference between the interest paid by a customer and the interest paid by the bank together with the bank's running expenses. The bank cannot reduce its expenses to pay out interest on loans, since the funds of some organisations serve as a source of credit for others.

The bank's net income is thus all the greater, the more loans it grants and the more rational the ways in which the loans are used. In other words, the bank depends on the performance of the enterprises it credits, and the rate of sale of their products.

Since both the bank and the enterprise it finances are State-owned (or, as in the case of collective farms, keenly interested in co-operation with the State), this sort of reciprocal

incentive is certainly in the national interests.

The essence of the economic reform currently in progress in the USSR is usually presented as a transition to more flexible methods of economic management. While individual enterprises remain unquestionably under the general financial control of the State, they have received greater economic independence.

#### Reform and the bank

Many problems arising out of the economic reform may be best solved with the active participation of banks. Let us take the question of production not envisaged by centralised targets. Its share will grow as the State-run system of material and technical supply is replaced by wholesale trade in the means of production.

In these conditions the bank, which is well-informed about prevailing economic conditions and is able to manoeuvre and make the necessary adjustments, is capable of stimulating the production of goods really needed by our society today, tomorrow and the day after.

Although enterprises have been given greater freedom in planning production and the sale of goods, a well-grounded production plan is impossible without reliable economic pointers. It is necessary to know what amounts of a given product are needed by society, what is the supply of such goods by other enterprises, what the possibilities are of procuring raw materials and other supplies;

in short, the enterprises must have detailed knowledge of the conditions and prospects of the socialist market.

A session of the USSR Supreme Soviet held in December 1966 pointed to considerable stocks of finished goods held by machine-building, food and light industry enterprises, which could not be marketed. It was pointed out that the State Bank should apply its credit machinery more decisively to prevent enterprises from over-fulfilling the State production plan by manufacturing goods in limited demand.

Here is another example: considerable resources must be concentrated for the construction of a major project or for the purchasing of the latest equipment. Unwilling to wait until the necessary funds have been accumulated, some enterprises often began modernising or new construction with insufficient funds. As a result, the work was protracted and the much-needed money was frozen.

The bank is quite capable, in the interests of the whole society, of opposing such dissipation of funds and their ineffective use.

Since 1966 the State Bank has been receiving payment for the use of the basic production funds and circulating assets by enterprises, as well as for fixed and rental payments. In 1968 the total amount of these payments reached 11,000 million roubles.

The problem of the efficient use of funds is being tackled resolutely by industrial enterprises, State farms, or government agricultural enterprises, which are being completely

switched over to the cost-accounting basis, and by collective farms, whose total capital investment today is over 5,000 million roubles a year.

Since 1959 the State Bank has been charged with financing the capital investments of State farms, the construction of schools, houses and hospitals in the countryside, as well as the long-term credit arrangements of collective farms. At present, collective farms have almost 7,000 million roubles in long-term credits.

#### Bank without private ownership

Some foreign observers see in the Soviet economic reform a departure from socialist principles and the introduction of elements of capitalism. The changes in Soviet bank practice are at times interpreted in a similar way.

It is pertinent to note in this connection that Vladimir Lenin, founder and first leader of the socialist State in Russia, advocated the employment of banks to run socialist economy even before the revolution triumphed.

"The biggest of biggest State banks, one for the whole country, with

branches in every district, at each factory, means nine-tenths of the socialist apparatus," he wrote.

Lenin pointed out that it was unthinkable to control and regulate production and distribution of goods without controlling and regulating banking operations.

"Socialism would be unfeasible without large banks, he went on. This is what Lenin wrote in 1918 in his *Theses on the Banking Policy*:

"The banking policy should not be limited to nationalisation; it should gradually but surely be directed towards making banks one apparatus of book-keeping and regulating the economic life of the entire country, organised in a socialist way."

The concern of which we have been speaking is the "biggest of the biggest", the State Bank of the Union of Soviet Socialist Republics.

Its operation is probably not ideal, and there is much room for improvement. Nevertheless, we consider the very possibility of self-adjustment and self-improvement a major advantage of the State Bank and the entire Soviet economy.

## NO ICE-BOX NEEDED HERE

From the magazine *TEKHNIKA—MOLOYDYOZHI*

In Tadzhikistan there is a remarkable cave near the River Pyanj, known locally as the refrigerator cave. An absolutely dry, cold wind blows through cracks in the bottom and sides of the cave at 56 miles per hour, and this keeps the temperature at about 0°F summer and winter.

Local people use the cave to store meat and cool water. Where the stream of cool air comes from is a mystery, as the mountain in which the cave is formed has no snow-cap.

## Captives of the crocodiles

by Valentin Akkuratov

from the newspaper *KOMSOMOLSKAYA PRAVDA (Vilnius)*

In the Spring of 1943 we were ferrying Catalina flying-boats from the United States to the Soviet Union. Receiving them at a base on the mainland we would take off for Africa, after a stop-over at Havana, wave-hopping across the Atlantic at 30ft. or even less to avoid being spotted by Nazi aircraft, ships and submarines.

It was tough going. Foam from the white horses dried on the windscreen, leaving minute flocks of salt until the glass became opaque. We could hardly see.

Once over Africa we were flying over tropical forests dotted with little lakes and lagoons. We were exhausted, and would have liked to be down there among the tall trees and calm expanses of water. Second pilot

Vitya Morev tore himself away from the window long enough to say, "How about landing?"

Bazin, the captain, seemed undecided. But it was high time we had a short rest, and the place seemed safe enough. At last he made up his mind and shouted, "Might as well get down there for half an hour. Have a look at the aircraft and relax for a while. Besides, we'll be able to pick some flowers to take home. The wife loves them."

The captain took over the controls and put the Catalina into a steep turn. For about five minutes we circled over countryside of fantastic beauty. At last Bazin chose a strip of water close to a big river. Plenty of room to land and to take off again.

We came in nicely. There was the

bump of the keel cutting the water, the aircraft slowed and settled down as we came to a stop on the mirror-smooth surface.

Opening the cabin and the machine-gun blisters, we sat for some minutes under the spell of the silence and the almost stifling perfume of masses of flowers that gleamed mysteriously in the dusk among the stately, curved royal palms about 50 yards away.

It was as if we had entered a gigantic bot-house. The sunset reflected on the water served as a background to the limpid image of the wings and the blades of the propellers. After the tension of war, the peacefulness of the scene soothed us.

My attention was caught by four little bumps rising out of the water not far away. The two nearest ones looked like some strange breathing tubes. The other two were gazing at me. Suddenly behind the bumps a warty, shiny back appeared. The brute gazing at me was about ten yards away. Its eyes were huge, the pupils a vertical line, like a cat's.

"Crocodiles!" I called out. A ring of the monsters was slowly closing in on us, and we were sitting about 18 inches above the water. Judging by the look of those crocs, they would not have the slightest difficulty in getting at us. We gazed at them as if hypnotised.

Suddenly the captain said quietly, "If we hit one of those things at speed it would rip the bottom off the hull. How are we going to take off?"

A snout appeared very close to the side of the flying-boat. I made a grab

for my automatic, but Morev bear me to it. With an expression of loathing he emptied his gun into the creature. The crocodile exploded out of the lagoon arching upwards. It was about 15 feet long. As its tail beat the water, soaking us with spray, I saw bony spines along its whole length.

As if the shots had served as a signal, in a flash three other great crocodiles threw themselves at the one the bullets had hit. Huge jaws rose and tails flailed, churning the water madly quite close to the aircraft, while the wounded monster was being torn to bits.

We all let fly with our automatics, shooting into the midst of the writhing creatures. The water was red with blood. There was a babel of damp champing, vile crunching, and splashing and flailing.

We all knew that the duraluminium hull, two millimetres thick, would provide poor protection against a crocodile's battering tail. Still, with one accord we took whatever cover the aircraft could offer, pitiful as it was.

Victor up in the nose opened fire with the machine-gun trying to disperse the mass of crocodiles gathering up ahead. Then, thumping his gun with his fist, he shouted, "We'll never be able to take off. They're blocking the way like jammed logs!"

The aircraft tilted as a crocodile tried to climb on to one of the outboard floats mounted on the wings. I raised my gun and took aim at it.

"Take it easy," Victor whispered

"You might pierce the float or something."

"To bell with it!" I said, firing. The brute's body slid slowly back into the lagoon.

The flying-boat gave another lurch and the captain barked, "Shoot them all! Man the machine-guns!"

The machine-guns opened fire at the enemy killers encircling us. Burst after burst—to no effect. We pumped lead into every crocodile we saw. But more and more came slithering down the muddy banks into the water to swim submerged towards the ghoulish feast.

"It's no damn good. We'll never be able to shoot all of them," the captain said with a gesture of disgust. "The only thing is to wait until the morning. Perhaps they'll go to rest on the banks."

"We wouldn't need to slap up against more than one of those fellows to find ourselves in queer street," the second pilot said flatly.

So there we were. We had flown across the Atlantic, skimming the waves. We had made one perfect landing in a rough sea on that trip and a no-less-perfect take-off. We had evaded a vigilant enemy, only to find ourselves the captives of a bunch of crocodiles.

It is no use trying to tell what we thought and felt during the next quarter of an hour. It would be impossible to repeat our highly colourful and often incoherent invective. Anyway it would take too long.

Mechanic Muslayev sat apart, resting his chin on his fists. Suddenly he got up and, without a word, began

draining petrol into a bucket from one of the fuel tanks. Then he made for the doorway.

"Hey! What do you think you're going to do, eh?" Bazin asked. "Pour that stuff on the water and light it?"

"No need to light it," Muslayev answered solemnly. "I've never known fish, fowl or any beast at all that could stand the stench of petrol. Let's see what happens when they get a whiff of this."

Soon the petrol was spreading rapidly over the water, pushing before it circular ripples all the hues of the rainbow. As soon as the film reached the crocodiles, they fled.

We started to congratulate Muslayev, thumping him on the back. But all he said was, "Start the engines. But careful's the word. One spark and we go up in flames, together with the crocodiles."

Our enthusiasm cooled off somewhat. Bazin and Victor glanced at each other. They took their places at the controls and waited while the mechanic poured a few more buckets of fuel on to the water. We kept an eye skinned for any petrol-resistant crocodile. But the surface of the lagoon was unbroken.

The motors were started and we held our breath. It only needed one little spark. . . .

We gathered speed, the throttle wide open and the engines roaring. The flying-boat rose on the step and then jerked free of the water.

No longer the crocodiles' captives, we set our course for home—the Soviet Union at war with Nazi Germany.

# DAUGHTER OF THE REVOLUTION

## From the book SOVIET WRITERS

Larissa Reisner was born in 1895 and died in 1926—a short life, but so full of strength and generosity in feelings, thought and deed that it was like several lives rolled into one.

Contemporaries described her as uncommonly beautiful, with a slender lithe figure, a quick step and an unquenchable fire in her large grey eyes.

Raised in the respectable quiet of a professor's apartment lined with great, heavy bookcases, Larissa grew up in the midst of the rarefied culture of the early 1900's. Her father, Mikhail Reisner, was a recognised authority on State law. But even before the first Russian revolution in 1905, he was forced to emigrate when he lost his job at the Agricultural Institute in Tomsk for "excessive free thinking" and open sympathy with student disorders.

Larissa's childhood was spent moving from one place to another with her family. They lived in France, then in Germany, where they made contact with German Social-Democrats. In 1905 Mikhail Reisner joined the Bolsheviks and returned to Russia.

Following the October 1917 Revolution, he helped to write some of the first decrees to be issued by the Soviet State. He was also one of the authors of the first Soviet Constitution. Larissa was always proud of her father and his revolutionary activity.

Larissa Reisner's writing career began before the Revolution. In 1913 she published an allegorical drama called *Atlantis*. During the First World War, she and her father put out an anti-military magazine, *Rudin*, containing literary criticism and articles on public affairs, poems, satirical studies, including some of her own.



She pawned everything she owned to keep the magazine going, and when no funds were left, the magazine closed.

Larissa joined the Revolution from the very start, breaking with her usual comforts without regret. She sharply felt the inevitability and historical justice of the revolutionary explosion.

Back in 1916, while travelling on the Volga, she wrote a letter home: "Nobody need fear for Russia. In every little watchman's hooch, in all the market towns, at every mooring, it has already been decided—without any turning back. The people here know all, they will not forgive or forget. At the exact moment when it is necessary, the judgment will be pronounced."

"Many people remember Larissa Reisner," wrote the poet, Vera Inher. "Inside the Smolny" just as the Revolution began, the corridors echoed to the heavy step of the army men, whose faces were grey from lack of sleep and all the backbreaking labour of the Revolution, about to surge forth into the square. Suddenly there was a knock on the door. There stood Larissa Reisner, her face glowing from the cool October air, in a pretty little fur coat.

"She was greeted with a terse question: What can you do, Comrade?"

"I can ride horseback, I can shoot, or be a scout. I can write in reports from the front. I can die, if I have to."

During the armed uprising of October 1917 she was put in charge of the art treasures of the Winter Palace, the former residence of the czars.

In 1918 she became a member of the Communist Party and the first woman political commissar in the general headquarters of the navy.

Larissa Reisner wrote of the revolutionary battles she saw. Her lively personal stories were printed in the newspapers, later separately in book form, called *The Front*.

These vignettes, that were sometimes poetry in prose, gave an idea of the beautiful and tragic face of the revolutionary epoch in its first years.

Larissa Reisner writes of the rigorous and majestic truth of the unforgettable Civil War days, which she herself took part in. She became an integral part of the great brotherhood of the revolutionary people.

"Brotherhood," she exclaims, "an over-used, unhappy word. But when it is heard in moments of danger and utter need, it is unselfish, it is holy, it can never again sound the same. He who has never lain, ragged and louse-ridden, and thought about how beautiful the world is, knows nothing of life, has never lived at all. The old has fallen and life is fighting with its bare hands for its incontrovertible truth. . . ."

Between 1921 and 1924 Larissa went abroad twice, to Afghanistan and to Germany. But if the artist in her was charmed with the exotic colour of

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\*The headquarters of the Revolution in Petrograd (now Leningrad).

Afghanistan or the combination of Gothic and functional modern in Germany, the revolutionary in her could not be indifferent to the Oriental feudal system around her, or ignore the struggle of the German proletariat. Proof of this is her reporting from Kabul and also her book, *Hamburg at the Barricades*, as well as the group of essays, *In the Land of Hindenburg*.

The last two years of her life she worked on historical themes. To her, history was a living process; she saw the origins of the October Revolution in the past.

It is difficult to say what it was in Larissa Reisner that attracted one most—was it her brilliant mind, her beauty, her learning, her talents, or perhaps her kindness? Yes, it was probably kindness more than anything else, because this trait is so rarely to be found in combination with a beautiful face, and comes as a surprise when seen to such a degree in so brilliant a woman.

In a short story called *Alysha*, Soviet writer Lydia Seifullina tells how Larissa Reisner took a street waif into her home and tried to give him the kind of upbringing he had missed.

"She was so very beautiful that she always seemed too rich and too festive for the numerous heavy chores of everyday life. Not many knew how little she earned, how much she worked, how afraid she was of over-estimating her achievements, and how little afraid of showing kindness.

"Disregarding the boy's ring-worm together with his tainted past, she took him in, without worrying about whether her earnings would be enough for them both, without retreating before the difficulties of re-training a little tramp and thief. She simply stretched out a helping hand."

And she did it whenever help was needed.

Late in 1925, Larissa Reisner fell ill with typhoid fever. Her heart, weak from too many bouts with malaria which she caught while travelling in Afghanistan, was unable to withstand this new disease.

She died in the flower of life and talent, but accomplished a great deal. Her books are read today, bringing to us the breath of the great year of 1917 and of the Revolution.



Larissa Reisner's book, *The Front*, recreates the grim years of the Civil War in Russia (1918-22). The excerpts printed here describe incidents in the battle life of the Volga-Caspian Fleet, to which she herself was an active witness.

No history can ever note and appreciate the brave deeds, great and small, that were daily performed by the men of the Volga Fleet. We don't even know the names of those who by their voluntary self-discipline, their fearlessness and their modesty,

helped create this magnificent fleet.

Of course, individuals do not make history, but we in Russia had so few individuals with character, and they had such great difficulty breaking through the layers of old and new bureaucracy, and so rarely found themselves fighting a real battle instead of one that could only be waged on paper. But since the Revolution did have some such people, it meant that Russia was convalescing and gathering strength.

At critical moments these men stood revealed as such, and their influence on the surrounding masses was palpable. They knew their heroic trade, and raised the pliable mass about them to their own level.

There was the calm and taciturn Yeliseyev, an artillery spotter, who could hit a small boat at a distance of eight miles with a long-range gun, his blue eyes with the eyelashes burned off in an explosion always looking far off into the distance.

Or Babkin, always feverish and with drunken eyes. He hadn't long to live and was spendthrift with the treasures of his carefree, kind and unbelievably steadfast soul. It was he who mined a large area over which the Whites were to pass and blew up their best ship, the *Trud*. Or take Nikolai Struisky, pilot of the flagship and chief of the operation section of the Fleet during the second half of the Kama campaign, one of the most expert and best-educated scamen serving the Soviet State irreproachably throughout the entire Civil War. At the same time he, together with junior officers, was forcibly

mobilised and was taken to the front practically under escort. They arrived on board the *Mezhen* hating the Revolution and sincerely convinced that all Bolsheviks were German spies.

The next morning they saw action. At first they had nothing for us but stony looks of distrust and the cold politeness of men who were drawn by force into a cause that was none of their affair, a cause they considered unjust and, therefore, hateful to them. But the first shell-bursts changed all this.

How can you do something by halves when one command from you may mean the lives of many men who will blindly obey, and the destroyer herself as well, as excellent a war machine as ever went into battle.

There is a thread of steel running between every sailor and his captain, whose voice commands the machine, the speed, the fire and the helm. A good captain cannot be a saboteur in battle. He forgets all his politics, he answers fire with fire, he will stubbornly attack and as stubbornly resist attack, doing his duty according to his profession, expertly and quite calmly.

After that, he is never free again. There is a bond between him and the commissar, the crew and the red flag fluttering from the mast. He cannot but feel the pride of the victor, the proud knowledge that he is needed, the absolute power that he is, an officer and a member of the intelligentsia, is invested with in the moment of danger.

And what after ten days of life on



the sea—a circumstance which in itself draws men closer together? Then after the first victory; or after the first ceremonial and festive welcome, with the workers of some little town they have liberated from the Whites, coming out with a brass band to greet them at the pier and shake the hand of the first sailor to jump ashore as warmly as the pampered aristocratic hand of the "Red officer" who walks down the gangplank on to the "alien" shore, looking uncertainly about, not yet daring to believe that he too is "comrade", a member of the "united army of labour" about which the raucous voice of the trumpet sings so excitedly, so clumsily and so joyfully in that provincial Internationale. . . .

And suddenly this great specialist, this captain of His Imperial Majesty's Service, realises with horror that his eyes are wet, the "waterworks" full on; that standing behind him is not "a band of German spies", but all Russia. She vitally needs his experience, his academic knowledge, his brain trained by years of industrious labour.

Someone starts a speech and oh, what a speech it is! So cocky, so crude, so ungrammatical, that only a week before it would have evoked nothing but a wry smile; but the captain listens with beating heart and unsteady hands, still afraid to admit to himself that the Russia of these peasant women, these deserters and these street boys, the *muzhiks* and the Soviets, is his Russia, for which he has fought and will continue to fight to the end, unashamed of its

lice, its hunger and its errors; not yet knowing, but already aware, that only here is justice, life and the future.

A week later, having washed the soot and gunpowder stains from his face and hair, wearing a clean collar, and with his gold buttons with the imperial eagles on them fastened up to his chin, the traces of the epaulettes and insignia not yet faded from his tunic, Comrade Struisky goes to have a talk with his Bolshevik chiefs.

As he speaks, both hands grip the arms of his chair as tightly as if he were on board ship at the height of a storm.

"In the first place, I do not believe that either you or Lenin, or anyone else in that sealed railway carriage, took any money at all from the Germans.

"In the second place, Russia is with you. And so are we. To any of my junior comrades who would like to know my opinion, I shall say the same thing.

"And thirdly, we have taken Elabuga. When we landed, as you know, we found nearly a hundred peasant caps on the shore. The whole place was spattered with brains. You saw it all yourselves—the shoes, the leg-wrappings, the blood. We were half-an-hour too late.

"That must never be allowed to happen again. We can sail by night. The channel is, of course, dangerous and an ambush is possible. There might be a shore battery . . . and yet. . ."

Out of his pocket comes a well

thumbed volume, "Operations of River Fleets During the Civil War in North America".

★ ★ ★

We have seen Berens, commander of all the naval forces of the Republic. He arrived at the front, amiable and intelligent as ever, deeply hurt by the crudities of the Revolution, which he takes as close to heart as an old and devoted minister might take the distressing whims of a young king.

His European mind found an unshakeable logic in the storm that was the Revolution, and, convinced by it almost against his will, voluntarily drew the inevitable conclusions from the enormous barbaric truth. And although it was on Berens' own head that the century-old pillars and family arms were crumbling, while the polished floors of the Admiralty rocked and swayed beneath his feet, his fine rationalist's mind triumphed, permitting neither silence nor distortions, though his heart cried out for mercy.

At last came a new power, forced him to accept it, and demanded allegiance. He accepted it with trepidation, with all the grace of an eighteenth-century courtier, an ageing nobleman and a Voltairian, one who had lived hard and was weary of life, but who in his declining years was conquered anew by passion—the final and most tender love for life, youth and creativity.

The Revolution made Berens, a theoretician and epicurean, roll up his lace-trimmed sleeves to dig a grave for his dead yesterdays and his beaten class. Berens set about arming

his ships against a restoration of the monarchy and believed, in spite of any dogmas, that his little fleets, carrying full cargoes of courage and the urge for self-sacrifice, could and would be victorious.

After the fall of Tsaritsin, Berens sat in his cabin and his eyes looked like any old man's who had just lost a son.

A marvellous night. That low, rosy moon again, cast-iron and mother-of-pearl, harsh as the odour of wormwood and delicate as a vineyard in bloom. The destroyers sail slowly up the river, time stops, the spars shivering in the sky like a fishnet, and in them a goodly catch of stars.

We sail past villages where the enemy is sleeping. The ship gropes for her place in the dark, locates the target, and at a low-voiced command fire bursts forth from the enormous hodies. Out there on the bank men are already dying.

A little peasant stands on the iron bridge, his hands clapped over his ears. In the magic light of the shell-bursts you can see his face for a moment; the straggly, reddish beard, the white shirt and the bast shoes. He is deafened, but after every explosion on shore his face is lit by a kind of majestic smile, an embarrassed, half-conscious, almost childish reflection of power.

There he stands, a Russian *muzhik* in bast shoes, on the armoured deck of a great warship, and that entire swift and silent giant with its obedient machinery, its wireless telegraph and a famous artillery expert

at the rangefinder, belongs to him and serves his supreme will, the will of Ivan Ivanovich, from the village of Solodniki.

Never before have a peasant's shoes ever stood on that tall, proud bridge, looking over the 100-millimetre cannon and the mine-laying apparatus, over the whole of Russia, over all mankind, smashed to smithereens and begun all over again by the Revolution.

Plucking the cotton out of his ear, the pride of the Marine Academy, Veckman, bends down to the wordless Ivan Ivanovich, who has gathered himself up in a little hall of happiness, and asks him in the darkness, "Comrade, are we aiming right? Is it above or below the bell tower?"

Ivan Ivanovich does not reply, but his shining eyes and puckered brow indicate that the aim couldn't be better.

It begins to grow light. A shell hursts on the very shore.

The Whites do not return the fire, but in the darkness one can sense their desperate flight. Half-dressed on their unbroke mounts, they will gallop all this long, hot night over the steppes, followed by the suddenly resurrected ghost of primitive, Mongolian fear.

The destroyer weighs anchor and descends with the current.

\* \* \*

The old men of the Revolution are superb. These men have long past lived through an ordinary life.

Take Alexander Vassilievich Saburov. His eldest son killed in the

war, his wife gradually turned into a little hundle of ageing thoughts and feelings, light, soft, and ash-grey. He himself had run the entire gamut, from lieutenant to Parisian émigré.

During his sojourn in Paris, Saburov lived like thousands of political exiles. He rose from factory-hand to factory-manager. The great devil's clock showed he was 58 years old when the Revolution began, but he dropped everything, returned to Russia, to depart for the front at once as a naval officer.

Perhaps, crossing the grey Baltic, he sat alone somewhere on deck, listening as the heavy waves crashed against the side of the ship, the sailors hurried across the deck, and the sea rose and fell below him, foaming. He must have counted the years he had lost, and seen before himself a new, wildly youthful mission.

When he arrived in Kazan on the Volga, he was given a heavy, slow, iron-clad barge on which the guns took turns going off and then cooling off, the smoke rising from them.

What that man could do with a gun! Short and slight, his face almost entirely grown over with a beard out of which stuck the bowl of his eternal pipe, his small, slanting Tartar eyes and his endless mutterings in French, Alexander Vassilievich half-squatted near his gun, whistling and winking, and squinted at the intricate tower of Sumbeki, which was as old and as venerable and as inwardly elegant as he himself. Then he opened fire.

As the third shell burst, something caught fire in Kazan, the enemy repelled, and the little tug-boat, puffing

and straining, quickly towed the barge out from under the rain of enemy shellfire.

The contrasts were striking: the unmanoeuvrable hulk of that barge and the faultless accuracy of her fire, those colossal guns, and kind little Alexander Vassilievich in full cbarge, he who would not hurt a fly, but who became silent and cold as a rock in the darkest moments. Death passed by, blind, with outspread wings wet from the fountains of hoiling, poisoned water. Death went past not daring to cut short the sixtieth year of that majestic old age.

\* \* \*

That night would see the storm of Tsaritsin, but now everyone was still alive and joyful and excited.

The clean little courtyard at staff headquarters was full of oleander in bloom, and the entire old-fashioned white house where Azin lived was filled with his ferocious joy. The crotchety rich widow smiled as she poured the tea in fat little cups, the slightest movement in the room causing the mountaints of gilded glassware to tremble and jingle in their cabinet, the potted plants making simple solemn patterns against the huge whitewashed stoves.

The clean whiteness, the oleographs of plump Adam and Eve in Paradise, the curtains at the windows, the printed cotton canopy over the bed. . . . And in the midst of all this, under this roof drenched in the moonlight from a peaceful autumn sky, on the eve of the storm, our most decisive minds were gathered—the wrinkled little face of

Misha Kalinin, like yesterday's toy halloon, surrounded by hair like thorns; and Azin, grown young again under the incredibly heavy weight of responsibility.

An hour later the little house on the moonlit bank, the swift horses of the troika, the road to the river and the final handshake—all was swept away by time.

All right long the terrible music of war raged over the river. The first to begin was the *Marx*, the other vessels sailing past her in the fog like ghosts. One, a second, a third, moving along the opposite bank where the shells were already hursting.

The forest ravine was also full of molten gold. From the bottom of the river rose thick columns of water. Sailors watched anxiously the ascent of a huge bright star like a white lantern. It was so large and steady that at first it looked like a signal flare, and a boat went to put it out.

Explosions showed red in the darkness ahead, as if the door of a red-hot stove were repeatedly being opened and closed, again and again. The shooting had reached that unanimous, intoxicating roar that signifies the beginning of the assault. Each ship was wrapped in her own shroud of smoke, each one moved and fought independently alone with the unseen enemy she had found and challenged in the night.

A flock of gunboats came around the point, the black minesweepers following, knights of the darkness, going to their posts with visors lowered, melancholy hunters after a dead weight.

Towards dawn, the firing died down. It was time for the army to advance, and the cutter dispatched with this message soon met the first of our line marching to Tsaritsin.

★ ★ ★

Azin led his units into battle without fanfare and nearly every day, forgetting that he was commander of the division and had not the right to risk his life.

He loved these men of his with a passion; he loved and understood every recruit drawn out from behind his mother's skirts, each youth with ears that stuck out under a huge service cap, his greatcoat reaching to his heels, and only one thought in his head—where to get rid of that heavy rifle.

With this kind of man he knew how to fight; with them he marched to victory, or went hungry, or lay flat on his back with typhus; then crossed the whole of Russia from one end to the other.

That evening at tea the talk turned to heroism, a strange subject for conversation among men long accustomed to war, most of them decorated with every possible symbol of valour.

A sceptic in a leather jacket, stirring his glass of tea, calmly rejected every sign of the romantic in this revolution, which had become a trade for him.

It seemed strange that one's own dear life, which seemed even dearer and more desirable when danger was past, should appear so bleak and grey to this debater, who would probably be ready in a fit of scientific

curiosity to flatten out his own brains and pour acid over them to see what would happen.

And Azin, his legs still aching from the saddle, the sweet weariness of autumn flowing through his whole body, from the red and gold trees, the green meadows blooming with their last brightness, from the big, kind eyes and flowing gait of the camels drawing the light carts made of reeds over the steppes. . . . Life seemed desirable indeed.

And then there was this tenderness—he could not remember for whom it was meant. Was it for the sailors he had met on shore, those with the scars on their throats who had been in the prison in Tsaritsin? Or for that letter received so tardily and from such a distance? And here was someone sitting and rejecting the essence of life, its wonders, its divine arbitrariness. He was rejecting heroism!

"You are a —", Azin caught sight of someone's warning glance and did not swear.

One should have taken a map; found upon it the red wreath of the Republic, for two years blooming alone in the whole world, heroically defended by an exhausted people. When was life ever more wonderful than in these great years of struggle and hardship?

If even now one saw nothing, felt no mercy, no anger, none of the glory with which even the poorest and greyest day was permeated in this only struggle in history, what was there to live for then? What to die for?

## MRS. LEPPE'S MUSEUM

*From the newspaper  
SOVIETSKAYA ESTONIA*

Mrs. Lydia Leppe of Tallinn, capital of the Soviet Republic of Estonia, has 18,000 postcards and 3,000 index cards in her flat—among other things.

Mrs. Leppe is not simply a hoarder. She has built up her own museum, mostly concerned with world cinema, and has been collecting items for it practically all her life. She was even collecting when she was in Leningrad during the blockade, during her nursing training and at the front.

Now Mrs. Leppe is a schoolteacher, and she devotes her spare time to her hobby. Her card index contains information about film stars throughout the world. Each card has a photograph of the actor or actress and carries information about the starring roles he or she has played, the names of their films, stills from them, and Press cuttings.

Details of every Soviet film director and cameraman are filed in the collection. Photographs and albums connected with the cinema are also filed away.

Apart from cinema, Mrs. Leppe's museum extends to world painting, ancient Russian icon-painting, the architectural features of many cities, geographical curiosities and prominent historical figures.

Many people who know about the collection have sent valuable postcards, photographs and drawings. Others write for information. Altogether Mrs. Leppe gets thousands of letters a month from people in the Soviet Union and abroad.

## PIGEONS



# THE PRODUCTION LINE

by Yevgeni MUSLIN, an engineer

*condensed from IZOBRETATEL I RATSIONALIZATOR,  
an industrial innovation magazine*

**"WANTED: pigeons as inspection-line checkers at ball-bearing plant. Wages, one grain of birdseed per ball. Comfortable bird-house supplied. All modern conveniences; newly furnished, superb view."**

**Will advertisements like these soon appear on Moscow notice-boards? Hardly likely. Yet here is the story of how three Soviet engineers are training pigeons to compete with workers and electronic inspection devices.**

Spotting rejects is a mechanical job, and requires keen sight and unflagging attention on the part of the inspector. But when thousands of small manufactured parts, as like as peas, flow past the inspector's eye, red with constant strain, it is inevitable that vigilance slackens and rejects fail to be thrown out.

The strength of a chain depends on the strength of its weakest link. In our jet age a tiny huer (a rough ridge left on cut or punched metal) on a small disc or piston may cause a failure of the hydraulic system of a plane or a rocket. Such accidents can have tragic consequences.

Perhaps, then, human inspection staff have become obsolete? Perhaps the job can be done better by machines? Some jobs can and others cannot.

Despite the tremendous progress achieved in electronics and cybernetics, the human eye remains the best instrument for such operations.

A burr might seem a minor defect. But to notice such defects in objects which have different shapes requires an instrument equipped with an electronic brain and capable of differentiating images.

To create it constitutes a most challenging task for cybernetics. So far, the problem has only been solved by nature, which has created a versatile, compact and highly effective instrument—the living eye.

But does the living eye at the conveyor belt have to be a human eye?

Anatoli Bykov, assistant chief production engineer at a Moscow plant,

once came across an article about the good visual memory of pigeons and their ability to differentiate at lightning speed between outlines, shapes and colours of things. A pigeon-fancier since boyhood, he was intrigued by the article.

As an engineer, he gave it a great deal of thought. Perhaps these birds, which have for centuries been serving man as messengers, can perform other important functions—say checking the quality of industrial products?

Together with two fellow-engineers, designer Svetlana Lapshina and laboratory head Alexander Panteleyev (another pigeon-fancier), Bykov huilt at his home a small conveyor belt to train pigeons.

If a machine part had a defect, the bird was expected to peck into a sharply defined rectangle on its surface, to be immediately rewarded by a grain of birdseed which was automatically supplied from a feeder. A light tap of its beak closed the electric contacts and the pigeon rejected part dropped into a special bin.

It required just as much painstaking effort to train the pigeons as it does to adjust a delicate electronic device. One bird would peck strongly, another weakly.

Bykov spent a long time selecting proper springs for the contacts. The feathered apprentice inspectors objected to the lighting or refused to eat from the feeder.

Now and then the engineers were driven to despair and felt like throwing up the whole thing. But they persisted. To avoid sceptical remarks

from both pigeon-fanciers and fellow-engineers they conducted their experiments in strict secrecy.

At last the pigeons learned to classify balls for bearings, but a day later balls without the least defect went flying into the reject bin. Neither better lighting nor a double reward of food helped. The engineers were completely discouraged until they noticed that the pigeons picked out every minor spot on the mirror-like surface—even the traces of sweaty fingers. They took these spots for defects.

The balls were rubbed with a dry rag and the job went perfectly.

Back from their summer vacation, the experimenters found their birds, Svet and Bion (a male and female), hatching their young. Nothing could get them back to work.

But the engineers' prolonged efforts had borne fruit, for they had developed excellent training techniques over the trial period and could now train new pigeons in a matter of days.

In one hour a trained pigeon inspector could classify from 3,000 to 4,000 pieces. The bird would work several hours without showing any signs of fatigue or flagging attention. From ball-bearings the birds soon went over to discs, screws, buttons, etc.

Initial training of a pigeon takes three or four days. In a fortnight or three weeks the bird gains in skill appreciably and learns to spot defects which no human eye, let alone electronic, can catch.

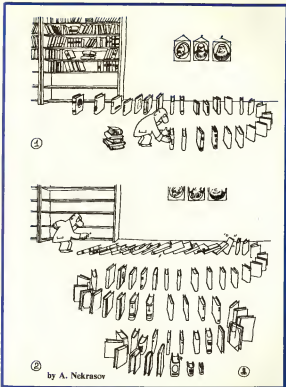
"These perfectly reliable winged inspectors so far have no rivals at this job, and I do not visualise any within the next few years," says Bykov. "Our tests have had quite satisfactory results. By building pigeon-houses, factories would benefit economically and ensure top-quality production."

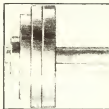
So now it is up to the factory managers. Will any of them take Bykov's experiment seriously, and offer jobs to pigeons? Time alone will tell.

## A VITAMIN FROM THE RHODODENDRON

*From the magazine KOMMUNIST*

It has long been known that the rhododendron, or alpine rose, contains tanning substances, glucosides and essential oils. Now the Plant Biochemistry Laboratory of the Georgian Academy of Sciences has discovered that its leaves also contain the rare vitamin P. So far obtained only from waste in the tea industry, it is used in the treatment of some psychiatric disturbances.





## A sport for the strongest



by Oleg SPASSKY

The "500 Club" is more than ten years old. Membership of this world club is granted to weightlifters who hoist a total of 500 kilos (1,100 lb) in the three events—snatch, jerk and press.

The first to break this physical and psychological barrier was Paul Anderson of the United States. He was followed by another 27 athletes in succeeding years.

The 29th person to join the "Club" tallied a total of 502.5 kilos on August 1, 1967. However, the 29th became the first.

All 28 men before him were heavyweights. Their weight is not limited by any rules. Anderson, for instance, weighed 330 lbs. The Soviet athlete, Leonid Zhabotinsky, tipped the scales at 352 lbs. There are bar-bell-ers who are heavier, but all of them have weighed in at over 220 lbs.

Now, for the first time, a middle-heavyweight has joined the "500 Club". In this division, an athlete may not weigh more than 198 lbs.

The weightlifting gym in Tallinn, Estonia. There is no use trying to talk—nobody will hear you because of the clanging, ringing, jangling iron. If you closed your eyes you might think you were in a foundry. But it is simply an ordinary training session for bar-bellers.

The thick bars tipped with huge "flapjacks" weighing from five to 20 kilos are slowly pushed upwards and then dropped on to the platform with a terrific noise.

Red faces, streaming with sweat, distorted by almost superhuman strain; wide leather belts on the verge of snapping; taped wrists; bruised chests—the weightlifters are training.

This is no easy sport. It is a sport for men, the strongest men in the world.

Jan Talts is in the gym alone, without a coach. He has no coach; or, to be correct, he is his own coach.

Who is Jan Talts?

Jan is a student at a teachers' training college. He also studies statistics. He goes in for figures in a big

way—mathematical figures, primarily those dealing with agriculture.

Jan grew up on a farm. He graduated from an agricultural school, worked as a farm mechanic and was head of a farm machinery repair shop.

His hobby? He finds it difficult to name any single hobby. He is interested in growing roses, in art and nature. Is there any connection between all these and the world of weightlifting? Perhaps there is, but so far I do not see any.

His family lived in the Pyarna region of Estonia. His father was a head livestock expert at the co-operative farm, his mother a teacher at the local school. It was a large family—four sons and three daughters. Jan, the youngest of the brothers, tried to keep up with them in everything: he learned how to harness the horse, how to mow hay, milk the cow, and in general fix things around the house.

He first saw the weights when he was 20. They were lying on the

ground next to the farm management office: the chairman of the management board, Johann Meiko, went in for athletic exercises and was considered the best wrestler in the neighbourhood.

Weightlifting offered a wonderful way of settling arguments as to who was the strongest man around. Impromptu contests took place almost daily.

Jan could run, jump, swim and play table-tennis. His first award was a diploma for winning a 40-metre dash; then he took second place in the shotput in Estonia; then set a junior world weightlifting record; then . . . then came Army service.

Unfortunately, Jan's commander was not much of a sports fan and in fact frowned upon sportsmen. As a result Jan did not make much progress in sports at this time.

Still, he managed to train and take part in Army competitions. Came the day when he caught the eye of the coach of the national weightlifting team.

condensed from the magazine *MOLODOI COMMUNIST*



*An interview and a glimpse into the future.*

**Q.** They say that the weightlifter's lot is the most difficult in sport. Do you agree?

**A.** Do you think it is easy to score in football or hockey? Do you think it is easy to jump over 7ft or so? No, I can't agree.

**Q.** Do you think of the weights as friend or foe?

**A.** The weight I place on the bar is not chosen by guesswork. So there is no need to be nervous, no need to fear the weight. Everything has been thought out beforehand, at the training sessions. So if I call for a certain weight, it means that I think



I am definitely ready to take it.

**Q.** People say that you have "iron" nerves, that you never know fears or doubts, that everything you do is planned down to the minute. Is this true?

**A.** I wouldn't say so. I have my doubts sometimes, and I am by no means "iron". I simply believe that every day should give you satisfaction and joy, and I tackle life on this basis. If there is anything I am nervous about, it is the unexpected: anything can happen.

**Q.** In your opinion, what qualities must an athlete possess to be a top-calibre weightlifter?

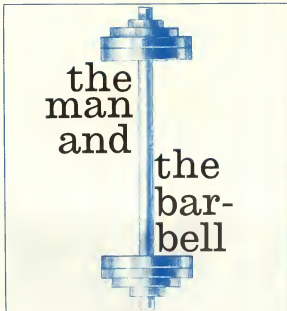
**A.** I would say primarily strength

and intelligence—if, of course, one does not want to become a robot. The most important thing is not how many times you lift a weight at one session—15, 17 or 20 times—but how you lift it, how well you are able to study your own movements and your own form.

Some people do not even believe me when I say that I lift little at training sessions. I am convinced that strength alone is not enough for victory. The most difficult task is to use your strength correctly.

It is all very fine when the coach thinks of everything. But who can feel my muscles, my mood and my pain better than myself?





the  
man  
and

the  
bar-  
bell

*Arkadi Vorobiev, Olympic champion and many times world champion and record-holder, is now senior coach with the national weightlifting team. He is interviewed by a NEDELYA reporter.*

**QUESTION:** Leonid Zhabotinsky, the strongest man in the world today, totalled 590 kilos in the three Olympic lifts. What do you think the next record will be, and do you think there are limits in weightlifting?

**ANSWER:** I believe that in the near future the figure will reach 650 kilos for the heavyweights. Zhabotinsky is ready now to lift 625 kilos (press—210, snatch—185, jerk—230). So I think it's too soon to speak of limits.

**QUESTION:** Does your mental approach make a difference in competition?

**ANSWER:** Certainly. We often see a competitor practically lose an event even before he goes out on the platform. And this may happen, even though during training sessions his results have been very promising.

Usually the fault lies with a coach who is not a good psychologist.

I will never forget my matches with the American, David Sheppard. Just before the bout was to start he casually mentioned some of his results during training. Yet on stage his lifts were about 10 kilos less.

After it was all over I asked David, "How about those results you mentioned earlier?" He laughed and said, "That was a psychological attack."

**QUESTION:** Do you think it

would be helpful to have a psychologist in a team?

**ANSWER:** No, although the American team even has a professor of theology. I think the coach should be the psychologist.

**QUESTION:** What, in your opinion, is the relationship between sports and science, a problem which is under extensive discussion at this time?

**ANSWER:** When I started out in sports we depended mostly on experience. We knew very little about the maximum permissible annual, monthly or even weekly stress on a sportsman.

Today we depend a great deal on science: psychology, mathematics, chemistry and medicine. Training programmes have been worked out and questions concerning diet and rest have been resolved.

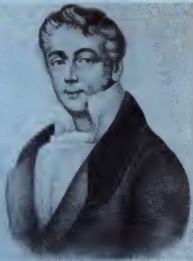
This year we intend to try out the advice of an electronic computer which should help us improve training methods.

**QUESTION:** Some people express the opinion that weightlifting is harmful for the human organism, that it retards growth. What is your opinion?

**ANSWER:** I would say that such statements are not true. After all, even table-tennis, if over-indulged in, can be harmful. It is important to know one's limits and to train properly.



# JOHN FIELD,



**'RUSSIAN  
IRISHMAN'**

*The memory of John Field, a remarkable Irishman, is revered in the Soviet Union. Among the many publications about this gifted musician is one by Alexander NIKOLAYEV, Professor of Moscow Conservatoire. Here is an excerpt from his monograph.*

On January 23, 1837, a man died in Moscow whose name is known to musicians the world over. His funeral drew a great crowd of friends and pupils who loved this brilliant pianist, talented composer and kind-hearted man.

He was buried in the Vvedensky Cemetery and his monument here this inscription in English:—

**JOHN FIELD**  
Born in Ireland  
in 1782  
Died in Moscow  
in 1837  
Erected to his memory  
by grateful  
friends and scholars

John Field came to Russia when he was 20, in company with Muzio Clementi, a well-known pianist and music publisher. The two musicians had performed in Paris, Vienna, Warsaw and many other European cities to appreciative audiences.

But Clementi and Field gave no concerts in St. Petersburg, where they settled upon their arrival. Both



became piano and harpsichord dealers.

Soon Clementi left for England, but Field stayed on in St. Petersburg and began preparing for his first public performance in Russia. The concert was held in the Philharmonic Society Hall on Nevsky Prospect in 1804 and was a great success.

That season, Field gave several more recitals which were enthusiastically received by the city's music lovers. Critics unanimously praised his finesse, and the profound emotion conveyed by his inspired playing captivated audiences.

In 1806 Field gave his first recital in Moscow. This marked the beginning of his friendly connections with Muscovites. While living in the capital (then St. Petersburg), he visited Moscow more and more often, staying for longer periods each time, until finally, in 1821, he settled there permanently.

His friends' reminiscences depict him as a modest person, seeking neither fame nor fortune, but only freedom and independence.

In St. Petersburg and Moscow he frequently met the writers Pushkin and Griboyedov, the composer Glinka, and other outstanding Russians. Glinka even took lessons from him for a time and later wrote:—

"Field's playing was strong, melodious and precise. His fingers beat the keys like heavy raindrops

and scattered over the keyboard like opalescent pearls. His rendition was never monotonous; on the contrary, it was full of improvisation, but he never strove for cheap effects."

Field's teaching activities left a deep imprint on the Russian piano school. Among his pupils, besides Glinka, were the Russian composers and pianists Alexei Verstovsky and Alexander Gurilyov, and Count Leo Tolstoy's mother.

In his book, "Childhood—Boyhood—Youth", Tolstoy recalled how his mother played her teacher's Second Piano Concerto, which he liked so much because it inspired in him light and pleasant memories.

Field admired Russian folk music and he arranged several Russian themes for the piano. His famous nocturnes sometimes contain melodious Russian folk song patterns.

Field is the recognised author of the nocturne genre, which later was so brilliantly developed by Frederic Chopin.

It is difficult to draw the line between John Field the composer, the pianist and the teacher; he made a considerable contribution in each sphere. A new, romantic style of Russian piano-playing is closely associated with his name.

Should we call John Field a Russian or an Irishman? Or was he both? We hope this monograph will encourage music lovers to become better acquainted with the life and work of this remarkable man.

## Heard this one?

from *KALENDAR KHOZYAISTVENNIKA*



Driving instructor: "Now tell me what you would do if your brakes were to fail suddenly."

Pupil: "I'd try to crash into the least expensive thing in sight."



"So you talk in your sleep?" the doctor said. "But if you live by yourself, that's no inconvenience to anybody."

"That's quite true," the patient replied. "But my colleagues laugh at me."



"If you smoke, you'll never grow up."

"All right. But Grandpa smokes and he's reached the age of eighty!"

"Yes, but if he hadn't smoked he'd have been eighty long ago."

# Soviet Orders



*Orders are among the many awards that tell about a country's past and present. By publishing an article about Soviet orders SPUTNIK wants to give its readers a glimpse of the USSR's not-so-distant past.*



*Order of the  
Red Banner of Labour*



*Order of the Red Banner*

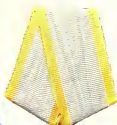


## First Order

In September 1918 the Soviet Government instituted the first Soviet military order: the Order of the Red Banner. The first person to wear it was Army Commander Vassili Blücher.

During the Civil War this order was conferred on 15,000 people.

It has been soldered



*Badge of Honour*

on to swords of honour presented to division, army and front commanders. It can also be awarded to certain regiments and institutions.

In 1920 another order was instituted: the Order of the Red Banner of Labour. This was conferred

on citizens for outstanding achievements in production, civil and public service, science, literature and the arts.

Another civilian order—the Badge of Honour—came into being in 1925. It is presented to leading workers in industry, agriculture, transport and trade, and also to men of science and cultural workers.



### The Order of Lenin

The Order of Lenin was instituted on April 6, 1930.

This highest Government decoration is awarded to individual citizens, collectives, factories, offices and institutions for distinguished service in Socialist construction. The order is also conferred on people who are awarded the highest titles of all: Hero of the Soviet Union and Hero of Socialist Labour.

During the war against Nazi Germany thousands of officers and men were decorated with the Order of Lenin for bravery in battle.

It was also conferred on many Soviet people for selfless labour during the war and in peace time, on institutions and enterprises and also on Hero-Cities (Moscow, Leningrad, Sevastopol, Odessa, Stalingrad, Kiev and the Brest Fortress).

### Man with Rifle

The order of the Red Star was instituted in April 1930. It has the figure of a rifleman in the centre. It was awarded to soldiers and

officers of the border guards. And the man first awarded the order was again Vassili Blücher, for commanding operations along the Soviet Far East border.



Order of the Red Star

### Gold Star of Heroes

The highest Government distinction—the title of Hero of the Soviet Union—was instituted on April 16, 1934. Along with the

title the recipient gets the Order of Lenin, the Gold Star medal and a certificate from the USSR Supreme Soviet Presidium.

First to receive this title were the Polar fliers who rescued the

crew of the Soviet Arctic ship *Chelyuskin*, crushed by ice in the Chukchee Sea in February 1934.

More than 10,000 men and officers received the title of Hero of the Soviet Union

*Gold Star medal that goes with the award, Hero of the Soviet Union*



*Gold Star medal that goes with the award, Hero of Socialist Labour*



in the years of the war against Hitler Germany.

On August 1, 1939, the USSR Supreme Soviet Presidium decreed that Heroes of the Soviet Union who again performed a feat of valour could be awarded a second Gold Star medal. To commemorate the feat, a bronze bust of the recipient would be erected in his home town or village.

On December 27, 1938, the USSR Supreme Soviet Presidium instituted the title of Hero of Socialist Labour. It was to be conferred on persons who had made an outstanding contribution to science, technology, industry, agriculture, transport, trade, literature and the arts.

The recipient is awarded the Order of Lenin, the gold medal "Hammer and Sickle", and receives a certificate from the USSR Supreme Soviet Presidium.

At present there are 3,828 men and women, Heroes of Socialist Labour.



### The Order of Glory

On November 8, 1943, the Order of Glory (First, Second and Third Class) was instituted. The medals are shown above.

Hundreds of thousands of soldiers and non-commissioned officers became recipients during the war.

But only about 2,000 of the bravest of the brave are bearers of all three classes of the Order of Glory.



*Order of Suvorov*



*Order of Kutuzov*



*Order of Bogdan Khmel'nitsky*



*Order of Ushakov*



*Order of Nakhimov*



*Order of Alexander Nevsky*

★ IN THE YEARS of the war against Hitler Germany (1941-45), orders named after famous Russian Army and Navy commanders of the past were instituted. These were the Orders of Suvorov, Kutuzov, Bogdan Khmeinitzky, Alexander Nevsky, Ushakov and Nakhimov.

They were conferred on marshals, generals, admirals and other officers for exemplary command of military operations. The first Order of Suvorov was presented to Marshal Georgi Zhukov.

In honour of the 50th anniversary of the Great October Socialist Revolution, the Order of the October Revolution was instituted on October 31, 1967.

This order is conferred on citizens, enterprises, institutions, military units and cities for their contribution to the strengthening and consolidation of the Soviet State. Foreigners can be awarded this order too.

The first of these Orders of the October



*Order of the October Revolution*



ORDER of VICTORY

Revolution were presented to the cities of Moscow and Leningrad.

The highest military order—the Order of Victory—was instituted in 1943. It was conferred on persons

from the High Command of the Soviet Army for successfully carrying out large-scale military operations.

This order is made of platinum: a ruby star in the centre is edged with diamonds.

The No.1 Order of Victory was also presented to Marshal Zhukov. Among foreign recipients were Field Marshal Montgomery, General Eisenhower and General de Gaulle.

## Doctor Chekhov

Chekhov was a doctor as well as a writer, and one day Maxim Gorky asked Chekhov to give him an examination. When it was all over, Gorky said:—

"Well, doctor, as far as you are concerned I no longer have any secrets. You must have a pretty good idea of my inner world."

"Hmm, yes . . . As much, let's say, as a book-binder has of the inside of a book."



## THOUGHTS AND APHORISMS OF ANTON CHEKHOV

- Brevity is the sister of talent.
- *Be clear of mind, pure of heart and clean of body.*
- If every man did his utmost on the piece of land that is his, how beautiful our earth would be!
- *It is given to us to live but once, and I should like my life to be fine, courageous and meaningful.*
- The more advanced a man's mental and moral development, the freer he is and the greater satisfaction he gets from life.
- *Never under any circumstances allow yourself to be boastful and conceited.*
- Indifference is paralysis of the spirit, a living death.
- *He who lies is tainted.*
- Crawlers ingratiate themselves with those they fear.



# New Buildings in Old Districts

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*from the magazine DEKORATIVNOYE ISKUSSTVO V SSSR  
(Decorative Art in the USSR)*

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The dislike that many people feel for new buildings does not last long, because people very quickly get used to anything new and after a while cannot imagine their city without this or that building. It happened with the Eiffel Tower, the Maison de la Radio and the Palais de la Défense in Paris; with Broadcasting House in London; with the Palace of Congresses in the Kremlin, the Rossiya Hotel and New Arbat in Moscow—although the argument about the latter is still going on.

New Arbat Street has been laid out in the very heart of old Moscow, involving the demolition of many old buildings and the erection of modern ferro-concrete-and-glass structures.

Was it a wise decision?

Those who are opposed to living in old houses in narrow streets agree that it was, but others feel that the old appearance of the city should be preserved and only the interiors of houses should be modernised. They are against radical surgery in town planning.



NEW ARBAT—this is what Muscovites call Kalinin Prospect, in the city's centre, running parallel to Arbat Street between the two old ring roads and leading to the western outskirts of Moscow.

Four 26-storey office buildings and five 22-storey blocks of flats (about 800 flats altogether) have been built there, along with a shopping centre, a restaurant, seven cafés, a cinema seating 3,000, a beauty parlour, a laundry, dry cleaners and so on.

A discussion was held recently at the editorial offices of *Decorative Art in the USSR* about New Arbat. Here are some of the points that were made.

★ ★ ★

*YVACHESLAV GLAZYCHEV, Assistant Art Director, Central Experimental Studio, USSR Artists' Union:—*

"In my opinion, New Arbat is a combination of metropolitanism and provincialism in architecture, of well thought-out plans and chance decisions.

"The very idea of constructing tall buildings in the centre of the city, with much space between them, is modern and rational, but the forms of these buildings are outdated. The contrast between the old church and a tall modern house at the beginning of the street is attractive. But the gaps between the old buildings in the background on the right seem accidental and discordant.

"Since there are going to be more

and more such districts as New Arbat, it is essential to plan their contrast very carefully. An analysis of the correct decisions and the chance mistakes which have occurred in the New Arbat scheme is very important for all our work of modernising the city."

*YURI ARNDT, Department Head, Central Research Institute of Designing Homes:—*

"If such a street had appeared in an entirely new neighbourhood on the south-western outskirts of Moscow I would have welcomed it. But since it has been laid out in one of the oldest districts, in what I would describe as a 'preserve', I consider it an encroachment, and a bad example.

"I think the entire Arbat neighbourhood should be scheduled as an architectural 'preserve'. There could be a number of such 'preserves' in Moscow.

"Naturally, all the buildings in these neighbourhoods will need restoring. We must not keep ruins as relics. But a fair-sized district which was formed more than a century ago and has unique features should be preserved."

*YURI GERCHUK, an art critic:—*

"New Arbat was laid out in such a way that it assumes the reconstruction of the neighbouring districts and the entire centre of the city on the same grand scale. It is this change in the scale of the city, one of the most distinctive features, that arouses the greatest alarm, the greatest opposition to the idea of New Arbat.

"Old Moscow will now be



*One of the new blocks on Kalinin Prospect (New Arbat to Muscovites)*

smothered in the scaffolding of tall modern buildings. Preservation of individual old buildings or even whole neighbourhoods will not help.

"Does that mean that we should not build anything new in the old city? Of course not. The city must live and develop. But we cannot build in the old city as if it were one great empty site.

"There is a definite framework, scale and type of planning which must be followed. Tall buildings can be erected, of course, but they must be away from the old centre, with its numerous historic streets and squares. But we are building 20-storey houses in the centre and five-storey blocks on the outskirts.

"Now that reconstruction has been

Artists at work on a mosaic for New Arbat



extended to Moscow's centre, we must work out some scientific principles of preservative construction."

*SELIM KHAN-MAGOMEDOV, Section Head, Institute of Theory, History and Planning of Soviet Architecture:—*

"The entire history of world architecture indicates that new architectural ensembles in old districts of a city can and must be built. But Muscovites are extremely concerned about the old buildings: they want to see some definite logic in the replacement of old buildings with new ones—not only from the practical point of view of living-space, but also that of historical continuity.

"In the case of New Arbat, the architects consider a new ensemble not as an addition to the old one, but as the beginning of a complete reconstruction of an entire district. Here the new does not seem to root itself in the old, but 'shoots' through it, as it were, dooming it to extinction.

"Although the dimensions of New Arbat are very impressive, people felt better in the back streets of the old Arbat district. New Arbat seems to have been designed, first and foremost, as a transport artery, rather than as a place for local residents, pedestrians."

\* \* \*

*VICTOR ELKONIN, artist:—*

"From what has so far been said it seems that we should not build modern structures in Moscow nowadays, for each step in this direction will inevitably mean detriment to the old.

"Just remember what happened when they began to reconstruct Moscow after the fire in 1812. Then classicism gradually ousted traditional Russian architecture. Mansions were built for the nobility to plans all of a type. Yet we now regard them as architectural monuments to be protected by the State.

"Our city is growing and developing all the time. I think we should see things in their true historical perspective and proceed from what we shall need in the future.

"I am an old Muscovite. And I still remember the old Kaluzhskaya Zastava, the city's former south-west boundary, and the very picturesque pub for cbsmen there. If I were asked today if I felt sorry to see the old district destroyed, I would say 'yes'.

"But I fully realise that it is senseless and useless to oppose the logic of historical development. We can, of course, shed tears over the good old past, but we must tackle new problems facing our cities the way we did in New Arbat.

"We must reconstruct, but do it the way Le Corbusier designed the famous office building in Myasnitsky (now Kirov) Street in Moscow, which blended marvellously with the old architectural ensemble.

"To put it in a nutshell: we should not erect buildings lacking a distinct style in the centre of Moscow, but we can and must build ultra-modern houses in the old districts."

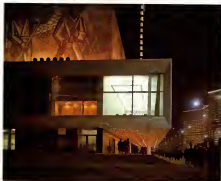
*Continued on page 116*





*Gleaming new bookshop . . .*

*. . . and the huge new Oktyabr Cinema*



*Arbet Restaurant*



*Refuelling on a shopping jaunt*



*"Helping herself" in the new super-market*

*Under the drier . . .*



**LEONID POLISHCHUK, artist,**  
said:—

"Victor Elkonin has anticipated my thoughts. I speak both as a person who took part in creating New Arbat and is responsible for what has been done, and as an old Muscovite, too.

"Ours is a developing city and it will change whether we like it or not, and it has a great future.

"I agree that New Arbat is far from perfect, but it has something that makes one stop and ponder. Yes, New Arbat is a contrast to old Arbat. But the sharper the contrast the better.

"New architectural ensembles give me a certain pleasant feeling. But I admit that what I like may arouse the opposite feeling in someone else."

**BORIS TALBERG, artist:—**

"I think that the New Arbat experiment is doubly interesting. It shows, first of all, how the new can accommodate to the old, and second, how man can accustom himself to the new.

"In my opinion, the drawback of the ensemble is its half-and-half architectural solution.

"All the buildings and the street itself have been designed in such a way that they have to be viewed from all directions. That's why old Arbat should not have interfered with New Arbat. And that's why I would have preferred a more radical solution: clearance of the district to the radius of a third of a mile, thereby creating a much greater distance between old Arbat and the new ensemble.

"I also object to leaving the old church standing too close to a great modern building. This makes it look like a toy."

**VLADIMIR ASSE, architect:—**

"Protests are being heard nowadays against new architectural ensembles interfering with old buildings in the city.

"Of course, New Arbat does not blend with old Moscow. But there have to be architectural contrasts. There are many examples of good architectural solutions based on contrasts (the railway station in Rome, or the Winter Palace in Leningrad, for instance).

"I am all for contrasting the new with the old."

**YURI GALPERIN, head of the Interior Decoration Section, Central Architectural Design Department:—**

"I think that New Arbat is an important experiment. It differs from others in that for the first time a new architectural ensemble has been built, not on a vacant site, but right in the middle of an old district.

"New and more plastic forms have been used here. I would call this a new experiment in the synthesis of arts."

**ANDREI VASNETSOV, artist:—**

"Most of what has so far been said has been negative. The trouble is that we know what we should not do, and how we should not do it, but there is no clear understanding of what we must do, and how.

"That is why it seems to me that any new bold decision, even if it has certain deficiencies, is positive since it stimulates development. Timidity and

too much caution retard progress."

**SHAGEN AIRAPETOV, architect:**

"We have made an attempt to draw a great number of painters and sculptors to our work on New Arbat.

"I cannot say that this experience of joint teamwork was an easy one. But what we have done is a big and very difficult job, and when the entire

scheme is ready many problems will have been solved.

"I think it is a gratifying fact that so many people argue about New Arbat, although it is not yet completed."

**Editor's note**—We hope that the pictures we publish here will help our readers to join in the discussion.

*Star-spangled night on Kalinin Prospect*



## STIMULANTS TO HEALING

*from the newspaper SOVIETSKAYA KIRGHIZIA*

The late Professor Vladimir Filatov, eminent eye surgeon, noticed that if a cornea to be used in a transplant operation was kept at a low temperature—about 25-28°F—it “took” better than a fresh cornea. This led him to investigate further, and eventually he discovered that the cooled tissue was able to accumulate highly active biological substances, which he called biogenous stimulators.

Subsequent research has shown that these stimulators can be found elsewhere—in some plants, for instance aloe, and also in placenta. They can be used in preparations suitable for injection, and the body's healing powers are thus strengthened. Improved preparations are being evolved all the time, and wide use is made of them at the Filatov Eye Institute in Odessa.

Fear has also been found to be a rich source of stimulators, and the Institute has developed a method of extracting from it a general stimulator which increases an organism's protective powers and improves vision.

## A name to note—Imiphos

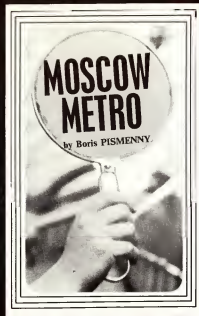
*from the magazine NAUKA I TEKHNIKA  
(Science and Engineering)*

A new tumour-killer named *Imiphos* has been developed by a research group headed by Dr. S. Giller at the Organic Synthesis Institute of the Latvian Academy of Sciences. As a remedy for erythremia (a blood disease), it is considerably more effective than the usual radioactive phosphorus treatment. Also, *Imiphos* can be used in cases of immunity, or when the patient reacts unfavourably to radioactive phosphorus.

The preparation is a white or yellowish crystalline powder, easily soluble in a saline solution. Its low toxicity means that it can be used for both in and out-patient treatment, in the latter case along with frequent blood counts.

*Imiphos* has been patented in many countries, and the Institute has received several orders from abroad.

*from the magazine VOKRUG SVETA (Around the World)*



“Are you far from the Metro?”  
This is a common question asked of Muscovites who have moved to a new flat. Just as on the shores of the Black Sea you ask a fellow holidaymaker, “Are you far from the sea?”

# MOSCOW METRO

I am too young to remember that morning in May 1935 when blue coaches took the first passengers from Sokolniki station in the northeast of the city to Komintern Street in the centre. But I have studied so many pictures of the occasion that it seems to me that I saw it with my own eyes—pre-war Moscow with its clanging tram-cars, far fewer motor cars and crowds of people.

It was not easy to lay the foundations for the first Metro lines. Shifting soil and underground streams created difficulties, but experienced miners from the Urals and the Donbass came to the aid of the capital. Scores of factories across the country supplied machinery and equipment for the new undertaking.

In September 1938 the second line was completed and crowds admired the palatial stations built of various shades of marble, with sculptures and paintings devoted to memorable events of the time—the conquest of the vast expanses of the Arctic and the non-stop flights from Moscow to the Far East and to America.

1941. I remember the Metro of those grim days and nights, when the black autumn sky was criss-crossed with the smoky beams of searchlights, and ground-floor windows of homes and

shops were boarded-up or blocked with sandbags.

The Metro became a second home for everyone. Deep in the bowels of the earth children slept peacefully through the German air-raids and the shattering boom of anti-aircraft batteries. And if they did awake in the night, painted blue skies and peaceful scenes met their eyes.

The war ended.

Mothers in berets and square-shouldered coats, and fathers, many of them still in trench-coats, set off for factories to begin the work of reconstruction. And when it was dark and cold the people, tired after a day's hard work, streamed along the streets or across the squares to where the big shining red letter "M" stood out as a sign of warmth, comfort and convenience.



In the Metro one can see all types of people: an inconspicuous old-timer who could well have worked on the first Metro line; a farm woman in an old-fashioned jacket of black plush; a dandified young student with a sober brown briefcase.

An impatient young girl dashes up the escalator, probably late for a date, while an old lady follows her with disapproving eyes.

And the children going up and



## MOSCOW METRO



*The map of the Metro . . . Lines of various colours interlace in the middle of the ring and stretch in all directions far beyond it. The map of the Metro is like the map of Moscow, with all roads leading to and from Red Square, the heart of the city.*

down the escalator. They are sure to be counting something: lamps, metal plates or bearded passengers.

In the Metro you can hear the latest news and firm opinions on every major or minor event in the world: the weather outside, the American elections, the score of an international football match, results of students' exams. . .

In the train, adults, if they are not talking or engrossed in reading, glance nonchalantly sideways, pretending to be absolutely disinterested in the faces and appearance of their fellow-passengers—although there can hardly be anything more fascinating than strange faces seen accidentally for a few fleeting moments.

One would think that a Muscovite, always pressed for time, would not notice the beauty of the marble halls and vestibules in the Metro. For how can you admire ornate decorations and meditate during rush hours, when the thing uppermost in your mind is that those ahead ought to move a bit faster? And the predominant thought is about where to stand on the platform in order to board the least crowded coach.

Yet a dyed-in-the-wool Muscovite cannot fail to notice familiar features of the stations he passes. His eye involuntarily catches the stained-glass panels decorating one station or the imposing bronze figures adorning another.

*It's 1 a.m.—the last passengers.*







*The station over the water: Lenin Hills station on bridge over Moskva river.*



*Three of the stations on Moscow's underground railway. On the left, Mayakovskiy station; and on the right Ploshchad Revolyutsii and the entrance to Lermontovskaya station.*

*Right: "Meet you outside Prospect Marx station, under the M."*



НА СТАЛИНА  
 БИБЛИОТЕКА ИМЕТ



### MOSCOW METRO: Facts and Figures

□ The Metro carries an average of 4,200,000 passengers daily. In the 33 years of its existence it has carried 25,000 million passengers.

□ The fare is five kopecks. For this sum you can travel any distance, change trains, etc.

□ By June 1968, there were 82 stations

□ Total length of all lines is 76.7 miles. Another 35 miles of new lines will be built between 1968 and 1975, linking outlying districts of the capital with its centre.

□ Interval between trains is 90 seconds in rush hours and up to

three minutes in quiet periods.

□ Average speed is 25 miles an hour.

□ The Metro operates from 6 a.m. to 1 a.m. on ordinary days, and till 2 a.m. on holidays.

□ Apart from Moscow, four Soviet cities have Metros—Leningrad, Kiev, Tbilisi and Baku.



*No tickets. Just drop a five-kopeck piece in the slot and you're in. For this sum you can travel any distance you like.*





*Rush hour in the Moscow Metro.*



*St. Petersburg Metro.*

# ANOTHER ADVANCE IN THE CANCER FIGHT

by Valeri PONOMARYOV

*from the newspaper  
SOVIETSKAYA ROSSIYA*

In 1948, Professor Lev Zilber began to investigate cancer cells with the aim of finding in them specific substances which would provide a way of distinguishing unhealthy cells from healthy ones, and so open the way for the effective early diagnosis and treatment of malignant tumours.

The series of discoveries made by Dr. Zilber and his team in 18 years of work provided a basis for cancer immunology and considerably stimulated progress on the virus theory of cancer. But Dr. Zilber's sudden death brought the research to a halt.

During the last few years of his life, Dr. Zilber worked in close

*Soviet scientists have found a simple, foolproof way to detect early cancer of the liver, a scourge second only to the cardiovascular diseases in number of victims. The new method of diagnosis has been confirmed experimentally, and this was reported recently to the French Academy by a group of French cancer specialists, headed by Professor Pierre Grabar, Director of the Cancer Research Institute in Paris.*

association with one of his pupils, Dr. Garry Abelev, a biologist who was studying liver cancer in animals.

The six-year research of Dr. Abelev and his team was finally crowned with success. Liver cancer cells in animals were found to generate a special substance and inject it into the bloodstream. The substance was alpha-globulin, a protein generated in the embryonic state of any organism, but never occurring in normal adult animals. The liver cells only produce alpha-globulin when liver cancer is present.

Dr. Abelev reported his findings to the Eighth International Cancer Congress, which was held in

Moscow in the summer of 1962.

A year later Dr. Yuri Tatarinov, a professor at the Astrakhan Medical College, discovered the same substance in the blood of a man suffering from primary liver cancer.

This caused a stir among the cancer specialists, because up to then it had been almost impossible to tell cancer of the liver from a number of other diseases. Quite often the patient had to undergo a painful operation for the doctors to obtain a specimen of his liver to confirm or exclude a diagnosis of cancer. In any case, the technique used made the chances of obtaining cancerous tissue very limited, and the study of a specimen containing only healthy cells sometimes led to a false conclusion.

The new diagnostic technique is simple, fast and painless; only a sample of the patient's blood is required.

Determining whether alpha-globulin is always present in the bloodstream of liver cancer patients, and at what stage in the course of the development of the cancerous tissue it can be detected in the bloodstream, took some time.

Professors Abelev, Tatarinov and Kravevsky and their associates had to discover if it could be detected at a stage early enough to treat the disease successfully, and also to find out if other forms of cancer produce this protein too. It took them three years to find the answers. The most stringent tests confirmed the diagnostic value of the discovery.

Clinical confirmation of the discovery was vital to all mankind, but

nobody could say how long this would have taken had not the geographical area of research been expanded to include countries where the incidence of liver cancer is hundreds of times higher.

In June 1967, the International Agency for Research on Cancer offered the Soviet scientists the opportunity to test their discovery thoroughly in Africa and Asia. This proposal was endorsed by the World Health Organization, and on July 1, 1967, the plan accordingly went into action.

Research centres, headed by the world's leading specialists in Nairobi (Kenya), Kampala (Uganda), Kinshasa (Congo), Ibadan (Nigeria), Dakar (Senegal), and Singapore, took samples of blood from patients. The samples were dispatched to Moscow, Astrakhan or Paris, where diagnoses were made by the alpha-globulin test. At the same time these diagnoses were checked against the usual liver sampling technique.

Recently the Soviet research workers have been receiving messages from all over the world, confirming their discovery.

Now that the new diagnostic technique has been fully approved, the Soviet scientists will concentrate on making it very much more sensitive. What is more, Professors Abelev and Tatarinov believe that it may be possible to detect other forms of cancer by the presence of so-far-undiscovered indicators, most probably embryonic proteins.

Victory over cancer is gradually coming within reach.

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Lev Landau, "the pride of our science" as *Pravda* described him, died on April 1, 1968. Academician Landau was awarded a Nobel Prize for his work in physics. He was a very cultivated man of wide interests, as can be seen from the impressions of the four men who contribute to the following article. They are Elevter ANDRONIKASHVILI, Fellow of the Georgian Academy of Sciences; Academician Vitall GINZBURG; Yaroslav GOLOVANOV, a *Komsomolskaya Pravda* reporter, and Danlil DANIN, a writer.

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**GOLOVANOV: Meteoric rise**

Lev Landau finished 10-year secondary school at 13, four years earlier than usual. At 14 he entered the university and studied in two departments simultaneously—physics and mathematics, and chemistry.

He studied chemistry simply because, as he said, he was fascinated by the subject, and he dropped it when he lost interest. "I wanted to do what really interested me," he told me.

He studied so hard that he began to see formulae in his dreams.

He published his first paper at the age of 18, while still a student, and three years later went abroad to study and work.

In 1932, aged 24, he returned to the Soviet Union and was appointed

head of the Department of Theoretical Physics at the Kharkov Institute of Physical Engineering.

He took his doctor's degree two years later.

In 1937 Landau went to Moscow to join the staff of the Institute of Physical Problems, which had been set up two years earlier by Academician Pyotr Kapitza. He remained there for many years.

Several years after he joined the Institute he produced his world-famous theory explaining the superfluidity of liquid helium, a property discovered by Kapitza. This theory won him the Nobel Prize for Physics in 1962.

Landau also gained world-wide renown for the GLAG theory (so called after the initial letters of the



names of the Soviet scientists Ginzburg, Landau, Abrikosov and Gorkov), which explained the phenomenon of superconductivity.

There is hardly a field of physics in which Landau did not carry out some research. He was interested in light and sound, in waves and particles, in atoms and stars. He was one of those rare versatile scientists who contributed more to various fields of science than a hundred specialists.

"I have always dealt with everything that catches my eye and shall continue to do so," Landau once told me. "What really interest me are the still-unknown natural phenomena."

I asked him for his views on literature and art, pointing out that Einstein used to say that Dostoevsky gave him more than the mathematician Gauss ever did.

Landau replied that he didn't like Dostoevsky and that his favourite authors were Gogol and Byron, and Konstantin Simonov his favourite Soviet writer.

"But this has no effect at all on my research work," he said. "For me, science and art are in no way connected."

He had the same insatiable curiosity in the arts that he displayed in physics. An actor friend once told me that while bathing in the Crimea he had got into an argument with

*Lev Landau with his son, Igor*

a stranger about the Stanislavsky method. Amazed by the man's knowledge, he asked what his profession was, thinking that he must surely be a fellow actor. He was even more amazed to find that the stranger was a physicist. Later he learned the man's name—Landau.

#### **ANDRONIKASHVILI: Unusual style of work**

Anyone on the staff of the Kapitza Institute can recall how Landau used to thrash out problems with a colleague while pacing a corridor. He was hardly ever seen in the library, although everyone knew he did not have a single book on physics at home.

It seemed to me that he gathered his phenomenal store of knowledge by ear, mostly at his seminars on theoretical physics.

He could grasp the most intricate formulae and points as he went along, and he would often cut a speaker short and ask him to proceed to the next topic.

Sometimes he gave consultations at home. These discussions went on for hours and did not end even when Mrs. Landau summoned us to dinner. Brandishing our knives and forks, we partook not so much of the food and drinks before us, as of the quantum theory of solids and the hydrodynamics of liquids.

But whenever I called on him in the evening at his first-floor maisonette, he would firmly announce, "Let's call it a day and enjoy ourselves."

It was quite useless to call on him for counsel and advice after 6.30 p.m.

That was shaving time for him before going to a show or recital. Debate would still go on—but now about art.

I remember how in 1960 my team was tackling an intricate theoretical problem. We applied for assistance to various leading scientists, but some doubted that there was any solution. So I went to Landau.

"Of course, of course," he said, his eyes fighting up. "I remember the solution roughly, but unfortunately I can't give you the exact formula." I said, "What do you mean, a rough solution? Nobody yet has ever solved it."

"Why, it's ancient history!" Landau replied. "I remember in Kazan when I was a war evacuee I had a toothache and had to sit for a long time in the dentist's waiting-room. I was feeling bored, so I started thinking about this problem and worked out the solution on a scrap of paper."

I begged him to do it again on the spot.

"Can't. Too lazy," he said, dismissing me. "Do it yourselves."

At any rate I now knew that there was a solution and in fact we found it.

This hastily-jotted-note-on-a-scrap-of-paper method was typical of Landau. He would agree to contribute a formula—mostly when lying on a couch. But he could never bring himself to write a word, and Yevgeni Lifshitz usually wrote his articles for him.

Today, Lifshitz is an Associate Member of the USSR Academy of Sciences, Landau's pupil and co-author of the celebrated *Course of*

*Theoretical Physics* which has been translated into 10 languages.

People used to joke that Lifshitz was to blame for Landau's atrocious scrawl. On the other hand, the solutions were always stunningly elegant, furnishing every physicist with tremendous aesthetic satisfaction.

**DANIN:** He could argue with the Pope

The time was February, 1931. A pupil of Danish nuclear physicist Niels Bohr had just come to Copenhagen to see his teacher. He at once inquired after the latest news. The well-known physicist, Georgi Gamov, silently held out a drawing depicting Landau gagged and bound fast to a chair with Bohr standing before him, his index finger raised and imploring, "Just a moment, Landau, let me slip a word in!"

Indeed, the discussions with the then 23-year-old Soviet physicist were the latest news in the world of physics in Copenhagen in 1931. Landau had come with a new piece of research carried out in association with his young British colleague, Rudolph Peierls. Bohr disagreed with their conclusions, but Landau stuck to his guns with all the ardour and fire of which he was so capable. Argument was a life-long passion with him.

Imagine the following scene. A lecturer is holding forth on an extremely obscure topic. There is silence, the kind of silence you get when only the lecturer has the right to speak. Suddenly the silence is rent

by a question. All heads are turned to a tall lean fellow with a profile as implacable as a blade, greying hair above an aggressive brow, and in his eyes attentiveness and impatience.

At once a discussion flares up, sharp and urgent. The lanky fellow's hail of questions and remarks reveal doubts and the answers which the lecturer himself could not provide.

I hear someone say to his neighbour, "Dau seems to be right."

The lecture goes on. But the spirit of academic serenity has gone. Another storm of discussion may burst out at any moment.

**ANDRONIKASHVILI:** Dynamite!

I recall Landau as he was between the ages of 35 and 40, at the height of his powers. In those years, 1945-49 I was one of his colleagues at the Kapitza Institute.

He was extremely thin, a walking question-mark, in fact. He had tapering hands with nervous fidgety fingers. Entering a lab, he would automatically pick up anything on a table. Of course, this always worried the experimenter, who would sometimes ask Landau to put his hands on the back of the chair so that he could pinion them there between his shoulderblades. It was most awkward, but it was the only way.

All of Landau's movements were angular, acutely so. His arms, for instance. They were sharply bent at the elbows and thrust away from the body.

Although tall, he was not sinuous, but rather rigid, like a pen-knife with several blades. He had a massive head

that sat well on his long neck. His pale face was in striking contrast to his mop of black, greying and slightly wavy hair. Pensive, sometimes tragic dark eyes beneath a hulging forehead.

All the same, he was usually full of fun. He often cracked jokes, and liked to salute his friends with a deep bow, his long arm almost brushing the floor as if holding an invisible plumed hat. He used to greet me with a motion of curling an imaginary moustache—he claimed that I wore a clipped moustache solely to give myself a superior air.

His tastes were often unorthodox and his pronouncements as angular as his general appearance. He was extreme in his likes and dislikes. He adored history, which he knew thoroughly. He abhorred the opera, which he never attended, on principle.

I may be wrong, but I always think a person has the right to make a mistake. Therefore, whenever I heard Landau cry, "Rubbish!" I demanded proof. And we often found that the question was not so stupid and quite deserved an answer from Dau himself.

Then I would boldly launch into the attack: "Now look here, why are you so intolerant of others shortcomings and so ready to bite their heads off just because they put a question awkwardly?"

"Now come on," Landau would reply with a disarming smile, "I'm so cannibal. On the contrary, I am very much the meek Christian. I'm simply doing my duty by defending science from the encroachment of . . ."

At this point I would immediately interrupt him so as not to hear the

sharp, if apt, epithets which could hurt a colleague.

Actually Landau was a very kind man, who gave moral and material help to many friends. Despite all his belligerence, he never did or wished anyone evil, although once he got it into his head that so-and-so was a pretty poor physicist he would continue to think that for many years, even though he might have been wrong.

I would say, "If you're not a cannibal, you're at least a Moslem, as your philosophy regarding women shows."

And Landau would retort, "I don't deny that I like a pretty face. But that doesn't mean I'm a Moslem. But what about you? The typical soul-seeker, and I despise you for it. Ugh! How can you be like that?"

Here he would about to someone passing by, "Look, we've got a new soul-seeker here! Elevator prizes a woman most for her soul instead of her face! And wears a moustache, too, mind you!"

He could wax eloquent on such topics. He worked out what we termed the Landau "module" for many cities. This was the ratio of the number of good-looking women to all the rest.

When he was asked if it was true that he jotted down the telephone numbers of lady friends, not in alphabetical order but according to a system of diminishing good looks, he would break out into guffaws, but never deny the charge.

#### GOLOVANOV: Uncompromising

Whenever Landau lectured to students, the idle and mediocre could

never look to him for any lenience.

"I remember once at the Kharkov University I gave a pass mark to only one student," Landau told me. "The others, and there were several dozen of them, didn't even know secondary school trigonometry, although they had all learned the Institute manuals by heart."

"How did you discover that?" I asked.

"I didn't question them on the examination papers," he said. "I thought up a problem to solve for every one of them, which meant they had to use their heads and know a little mathematics and physics. The students who didn't understand the formulae they rattled off by heart, flunked the exam."

"Then I examined them once again, offering more problems that I had thought up. I could give a pass mark to only one student, who really knew his subject. There was a big row, and the People's Commissar of Education turned up in person from Kiev. "They pleaded with me, but what could I do? As a result I had to tender my resignation."

Once Landau was asked to review a magisterial dissertation, and said it was no better than a graduate's thesis. He was told that it was an exceptional case, that the aspirant had had a very hard time and that both his career and his family happiness depended on his getting the degree.

Landau was sympathetic, but refused to compromise, and wrote, "In my opinion this magisterial dissertation is not inferior to the doctoral dissertations of X, Y and Z." He was not sinning against the truth; he

indeed believed the dissertations of all three X, Y and Z were very inferior.

#### ANDRONIKASHVILI: New method

I was a student at the Leningrad Polytechnic when 24-year-old Professor Landau, newly back from foreign parts, came to lecture. His lectures were completely informal, with no cumbersome constructions or intricate formulae. But even when he wrote a simple-looking formula, one always sensed his impeccable knowledge of mathematics.

He demanded this of us, too. The main thing was that he made us grasp the physical import of the abstract symbols and notions, which is often more baffling than the knottiest formula.

He worked hard to debunk entrenched academic, formalistic educational canons, which lent themselves to cramming. These new methods of instruction, which called for understanding and creative initiative, slowly but surely became established as the Landau-Lifshitz *Course of Theoretical Physics* was published.

As volume after volume appeared over the years, they were translated in the USA, Britain and China, providing a manual for generations of physicists.

#### GINZBURG: Scientist, teacher and man

In January, 1962, on a road outside Moscow, a terrible tragedy occurred. A lorry collided with Landau's car. His head and body shockingly injured, Landau was rushed to the nearest hospital.

Doctors say that theoretically such injuries mean certain death. Landau did indeed experience four clinical deaths, but each time he was resuscitated.

About 100 physicists, both Soviet and foreign, joined forces with the doctors. Some spent sleepless nights in hospital corridors, others pestered celebrated physicians for advice and aid, still others dispatched the rarest drugs by plane.

The collaboration of the scientists of Europe and America—among them Niels Bohr of Denmark, John Cockcroft of Britain, Frantisek Schorm of Czechoslovakia and Wildorf Penfield of Canada, to mention only four—has become a legend.

Landau survived to return to physics. The saga of the fight for his life demonstrated his true value for science in the eyes of both laymen and of some specialists who knew Landau, not so much from his work, as from his titles—Fellow of the British Royal Society, the Danish and Netherlands Academies and the U.S. National Academy.

All who knew Landau only from what he wrote may think he was primarily a teacher, the author of textbooks and manuals, a man who reduced to a system what was already known and who did not discover anything new. That is not true.

Landau was above all the researcher; bappily, however, his creative genius was wedded to teaching talent. There are few teachers and few scientists like him; such combination in one person is extremely rare.



## Answers from Mayakovsky . . .

Soviet poet Mayakovsky (1895-1930) was famed for his swift repartee, and many people came to his poetry readings to hear the give-and-take of impromptu discussion, as well as the poetry itself.

"Mayakovsky!" someone once shouted from the audience. "You consider yourself a collectivist proletarian poet, but you keep saying I, I, I."

The poet looked round.

"Are you implying that Czar Nicholas II was a collectivist, just because he always said 'We, Nicholas II'?"

"Now listen, Mayakovsky, do you imagine that we're all idiots?" shouted the heckler.

"Why all of you? Just now I only see one!"

\* \* \*



## . . . and Rossini

On one occasion Rossini was attending a performance of Mozart's *Don Giovanni*. The famous singer Rubini was cast in one of the main roles.

A young man sitting next to Rossini insisted on joining in the arias with such gusto that the people around him were annoyed. Finally, Rossini could stand it no longer and said in quite a loud voice, "What an ass!"

"Do you mean me, by any chance?" the young man asked belligerently.

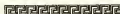
"No, of course not," said Rossini. "I mean that dolt Rubini, who's making so much noise we can't hear you sing."

## THE CULPRITS

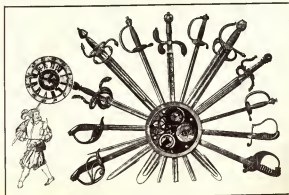
ONE DAY, when Ivan the Terrible was riding past a church in Pskov, the bell suddenly tolled. His horse reared, and it took all the Czar's skill to keep his seat. In punishment for this "evil deed," the bell was taken down and its lugs knocked off.



DURING the Black Death riots in Moscow in 1771, the townsfolk rang the tocsin on Nabatnaya Tower in the Kremlin. The irate Empress Catherine II caused the tongue of the bell to be removed. Thus it hung for over 30 years.



THE punctilious Emperor Paul I had an English clock in his study. One day he was late for a parade, and had the clock placed under arrest in the guard-room.



# three stages of enlightenment

## TRAVEL NOTES FROM THE PAMIRS

by Leonid LIKHODEYEV

*from the collection BRIGANTINE*



The Pamirs are one of the great Central Asian mountain systems that form "the roof of the world". Most of the Pamir country is in the USSR and takes in the Gorno (Mountain) Badkhishtan Autonomous Region and part of the Fergana Region of the Tajik Republic. The eastern end and southern tip of the range lie in China.

The Pamirs are mainly inhabited by Tajiks and Kirghiz. The highest peak is Kongur, 25,325 feet.

There are more than 10,000 glaciers in the Pamirs, including the world's greatest, Fedchenko, which is some 85 miles long and feeds many mighty rivers.



**ABOUT THE WRITER:** In 1967 a collection of satirical stories by Leonid Likhodeyev came off the press. The editor asked the author to write his autobiography. Here is what Likhodeyev wrote—"I was born in 1921. Forty-five years later I was requested to write an autobiography, which gave me the reason to believe that there was some sense in my being born, after all.

"Now I write pamphlets, sketches and stories, which is my line.

"In my early youth I wrote verses. The point is that I had collected quite a few rhymes when I was teasing my playmates. But soon the reserve was exhausted and I felt I had nowhere to turn to for more. Suddenly I realized that life was full of fun. I wondered why everything about me was so funny. In fact this question has been bothering me to this day. Sometimes I come close to the answer and immediately jot down notes for my new book (this one is the 13th collection of stories). But at the very last moment, when the book is almost finished, I think of a better answer and start the whole thing all over again.

"And when finally I understand why life is funny, I will stop writing."

Leonid Likhodeyev was born in the town of Doestak, Southern Ukraine. His first works were published while he was still at school. The war broke out when he was in his second year at Odessa University and Likhodeyev went to the front.

His first major book, "Taming of a Desert", came out in 1953. This followed two collections of verses, "With My Own Eyes" (1955) and "An Open Window" (1957). His travelogues, "A Trip to Tafalaria" and "The Volga Falls into the Caspian Sea", came out in 1959 and 1960. The following year his play, "Steps in the Dawn", was published. In the same year Likhodeyev's "Pamphlets" came out, to be followed by a collection of satirical stories, "The Philistine" (1962).

"Three Stages of Enlightenment" was published in 1967.

*And then I turned to the driver and said, "Kadam," I said, "give me the wheel, Kadam. For I am drowning in the depths of soul-searching. . . ."*

To ask for an assignment to Dushanbe, capital of the Tajik Republic, is like asking to be sent to Eden at the firm's expense. Beyond Dushanbe lie the Pamirs—"the roof of the world"—where panthers prowl and make their lairs. Rivers stream down from the Pamirs like rivulets of rain from city roofs, to flow on into distant green valleys.

And that is where we are going—to the "Roof", to the source of the rivers.

Mountain snows lie ahead, flat tablelands, tea-houses, modern excavations at prehistoric settlements: all that mysterious world beloved of lorry drivers, geologists and plain wanderers.

Three stages of enlightenment await the traveller. Acquaintance,

which delights the eye; contemplation, which delights the mind; and finally, absorption of what one has seen, which delights the heart.

★ ★ ★ ★ ★

The plane which flies from Dushanbe to the Pamirs is small as a grasshopper and resolute as a falcon. When it rises into the air, you leave all habitual notions of air travel behind you on the ground. Instead of broad horizons, blue ribbons of rivers and other vistas familiar to eagles, out of the mists of the Palaeolithic age rise rough, untidy bulks of higgledy-piggledy mountains, as if carelessly dropped by a sculptor who suddenly had to leave in a hurry, his work unfinished.

The pilot pushes aside his oxygen

mask and warns me, "Only let's have none of that writing that the plane barely skims through the mountain pass. There's at least 100 feet clearance between the wing-tip and the cliff."

Around a turn in the pass a drifting cloud obscures the wall we are headed for, and it is not at all clear whether there is anything left of the 100 feet or whether they have melted away in the wispy mist.

But the cloud floats by and the feet are still there. Marvellous feet, the best I've ever known.

Then more cliffs, more peaks banded in sterile snow, and finally the highlight of the circus turn, sans safety nets or audience, sans thrilling music or spotlights: a great stunt, when the pilot banks his plane into a twisting, narrow corridor, turns in it without disturbing the neighbouring sovereign power, rounds a blind corner and lands on a tiny field squashed between a river and the cliff.

Our plane was swift, but the mountains were majestic and our route resembled an old caravan road with its fords and crossings determined by terrain and experience. Oases awaited us, and landing strips fragrant with country smells. And every time the little plane tipped its wing to land, I would think of the saying of the old *hafiz*, great in wisdom and accurate with words:

*"Everything will be as it should be. Even if it be otherwise."*

But it wasn't "otherwise"...

My new acquaintance, a journalist named Rasso Basir, was talking of

Bedil, the ancient poet and philosopher. Bedil considered that man evolved through labour.

"He said so long before Engels," Rasso underlined. "It must have been obvious even then."

We met in Vanch—rich, green Vanch—where the apricot permits itself the luxury of casting a shadow on the silken grass, where old plane-trees are set about with clay shards, like grandfathers with cushions, and where the ever-present mountains suddenly part and the River Vanch flows serenely into the Pyanj.

Sweet green grass carpeted the meadow, beckoning the traveller to remove his shoes and stretch out under the trees and gaze through lacy leaves at the blue sky where fleecy clouds grazed.

This was sunny Badakhshan, the broad threshold of the Pamirs. Fantastic roads and tilled fields high above the clouds were forgotten, and only the light freshness wafted from an irrigation ditch reminded one of the eternal glaciers from which the reluctant water streamed.

"Rasso," I said, "we constantly perfect ourselves through labour. Is it possible we shall never just lie still without cares, under the cherry trees of Vanch; that we shall never discover the meaning of life?"

Basir, short and with one of those big noses so beloved of cartoonists, lay down beside me.

"Hasten to rest," he said. "We are carried along by the cross of life, and the devil only knows where! Probably to that labour old Bedil

spoke of. And actually, he wasn't so old... a man only has to say something profound and we immediately stick a beard on him."

"Rasso," I said, "let us stop evolving for two hours. Let us put aside our tools of work and not advance an inch from our present level. What of the great *hafizes*, the sages, Rasso? All life long we subsist on their wisdom and still leave enough for our descendants. Did they never rest?"

"They were a part of nature, colleague," said Rasso. "And nature is always on the go. Have you not noticed?"

It was not possible for a visitor simply to lie still on the grass in Vanch. A rug materialised and a company of 12, one of whom was definitely Nasreddin Hoja, that legendary folk-hero and wit of the East. Then green tea and fragrant flat bread appeared.

This was the beginning of the Pamirs. The first stage of enlightenment. Ahead were fields no bigger than the palm of a man's hand, ahead were roads and barren lands. But the jealous Pamir pride starts here. It was here I first heard the saying, "Who to Vanch has not been, the Pamirs has not seen."

Everything will be as it should be, and tomorrow the people of Rushan will substitute "Rushan" for "Vanch". But in the meantime, in the speech of Vanch rings the unshakable certainty that if everyone in the Pamirs lived the way they do in Vanch, the kingdom of heaven would be at hand.

The farm team leader with the velvet eyes of a gazelle raised his *pijala*, his bowl of tea, and the ends of his moustache trembled like black pennants. He did not know how to begin and therefore began with a smile.

"Allah started his tour of inspection with Vanch," he said. "He came here with his wife. Good climate. Fruits, vegetables. Here people live on and on, like the gods."

Nasreddin Hoja raised his forefinger, "You see that old man? He's past 100!"

The venerable teacher with the eternal smile revealing a complete set of steel teeth—I could have sworn there were four rows—invited me to a game of chess. It was a wonderful game. The guest wished to lose in deference to his host and the host in deference to his guest. But it was difficult for the host, very difficult, and he was forced to win.

He laughed like a child, but I could sense he was grieved by my loss.

I was not yet familiar with that Pamir trait, the desire to share, which is at the very root of all relationships. It is not the kindness of the weak, but a positive, joyous kindness and concern.

We strolled in Vanch, looked over the fields and gardens, estimated the harvest; our hosts maintained that the choicest potatoes in the world are grown here in Vanch, of which I was convinced soon afterwards. I mentioned that I was interested in the local improvised songs, which I had heard Vanch was famous for.

That evening, in "Grandfather Abdullah's" home, sumptuous dishes were set out on the rug, among which the tastiest potato in the world, fried to the colour of rich gold, occupied a place of honour.

"Grandfather Abdullah" was a rather youthful-looking man whose reflective gaze indicated a philosophical turn of mind. He had only just learned that he had become a grandfather, and not because fate had presented him with a grandson, but because a friend had written a book about him entitled "Grandfather Abdullah's Tales".

Rasso told the story, and Abdullah himself observed that he was quite prepared to become a grandfather if it was likely to make anybody happy.

The ubiquitous chess set was placed by my elbow with a clear hint that I could have my revenge. But everything will be as it should be, and this time the venerable teacher had to content himself with a gameless draw.

Guests appeared, one after another and it was hard to know who was the champion on the *dudar* or the *dobra*, because each man picked up the musical instruments as though he never held anything else in his hand. Yet these were farm workers, agronomists, mechanics; one was even chairman of a local co-operative society.

Nasreddin Hoja was among the guests, but it was the chairman who held everyone's attention. He picked up the *dudar* and in a high voice started singing that "wild and savage

was he who had no room in his heart for love." And we raised our bowls of vodka to this, because only he who was wild and savage would not agree with the words of the song.

The doorway was crowded with such beauties that it immediately became clear precisely why Allah had started his tour of inspection in Vanch, and exactly who he had in mind when he described the houris promised to the true believers who served faithfully on earth, and also why the men of Vanch are considered godless: why should they dream of houris in the next world and suffer in this one?

Beauties who had never worn the veil gazed at us serenely and frankly. The men at the feast were not their lords and masters, but merely men, who must be cared for, as everyone knows, like children.

The chairman improvised epigrams and madrigals, handed the instrument round the circle, and each singer would pick up the song along with the *dudar*.

The team leader curled his moustache and announced that such songs could not be heard this side of Khorog, the centre of the Mountain-Badakhshan Autonomous Region, and not in Khorog unless the singers of Vanch happened to be there on a visit.

"These are ditties in the form of a love song," said Rasso, "that are really satirical harbs."

And then a dervish appeared in an old, worn-out robe and a turhan. A dervish in whom one had difficulty in recognising the chairman.

"I seek my beloved," intoned the dervish. "I search for her to the ends of the earth. But to walk I need shoes and in our store. . ."

And so it went on. Nothing was sacred. Slings and arrows flew fast and sharp at individuals, the collective farm, the co-operative; Rasso finally could not keep up with the translation. The guests roared. The chairman rolled his eyes like a muezzin at the top of a minaret and folded his palms like a Moslem at prayer.

He played his role so well, and anyone to whom he turned entered into the spirit of the game so readily, that it seemed as if the whole performance had been thoroughly rehearsed. In fact it was all improvisation. These were talented people, capable of lifting a hit of fun to the level of an art.

And in the morning I left for Rushan.

★ ★ ★ ★ ★

Green Rushan fought for space in a narrow valley. Its greenery, like spray from a rushing river, flew upwards, clinging to the rocks.

What does tilling the land mean? There are fields which are laid out in geometrical patterns over open flat land. And there are tiny patches of tilled earth wrested from nature by a hand-to-hand struggle with her.

You can't ride to these in comfort. You can't even walk to them. You can only scramble up to them. You must climb up to the very glaciers with spade in hand to dig narrow irrigation ditches. You must be careful, oh so careful, to obey all the rules,

because if the life-giving water rises too high it will not only saturate the thirsty roots, but wash everything away down the steep mountainside.

Tractors are of no use here. For no tractor, no mechanised transport of any kind, can he brought up to these patches of land.

Modern ploughs are of no use here, either. The metal blade would shatter against the diamond-hard underlying rock.

The only useful tool is a small, wooden plough—one of the oldest tools in the world. For a man can drag a wooden plough with him to any height, and with a wooden plough he can lightly skim over the invisible houlder, as a cautious lecturer skirts a dangerous subject.

For some reason or other it is considered not the thing, in this age of mechanisation, to write that somewhere in our country people still have to resort to a wooden plough. But they do. And not because there are no tractors, but because there is no other way.

We walked through Rushan, and Malikov, the local secretary of the Party, pointed to the tilled fields above the clouds. "There a man feels like Robinson Crusoe. Or perhaps Man Friday. Incidentally, the people of Rushan find nothing strange in such a name. I am called Chorshanhe, which means Wednesday. And the production manager is called Shanhe—Saturday."

The production manager was a very thin, brown man, with long stork-like legs. We found him at work on a plot of land near his office.

"We need to know more," he said, "we need to know more. Once we know, then we can draw conclusions. I am reading the works of Nikolai Vavilov and am getting a lot of useful ideas. It sometimes seems as if he were writing about the exact kind of soil we have here."

Malikov suggested we take a trip along the Bartang River as far as the road would permit.

"As far as the Devil's Bridge," said Shanbe. "You must see it."

Shanbe was a wonderful guide. He knew every inch of cultivated ground stranded in the mountains. Knew it personally and could describe its peculiarities in detail.

We crept along a path which was a motor road only because motor vehicles use it. The greenery had ended right outside Rushan, and now we had only bare rock in sharply delineated colours all around us.

The rocks appeared to be one-dimensional because there was only light and shadow. The snow was white and blue, ravines brown and black, while the Bartang itself was the green of a smooth canvas.

There were no trees; in the crevices wild grass distrustfully poked up its sharp feelers. Paths dotted their way towards the peaks, and the mind halted at the thought that man could possibly be responsible for them. But then still higher ribbons could be seen that only man could have made—irrigation canals. And beside the ribbons, scattered over the mountains, were patches of green—geometrical lines of wheat, rye and barley.

Below there was nothing. Only the

traces of frequent landslides and recently-crashed boulders weighing thousands of tons. But above was life. And it was clear that no vegetation could survive among these rocks unless aided by man.

"We don't have much land," said Shanbe, "not like in Vanch. Vanch is not like the Pamirs. We have a saying, 'Who in Rushan has not seen, the Pamirs has not seen.'"

I started to laugh and said that I had already heard the proverb. Shanbe joined in my laughter, and Malikov observed that such sayings did more for local pride than for truth.

"We do have some bigger fields, too," he said. "In the mountains, beside Lake Saroz, we have almost 5,000 acres of level ground. There we could establish a real livestock industry. Bring water to that land and in a week it will grow thick wild alfalfa."

We got through to the Devil's Bridge and the jeep hacked up along the cliff, seeking space to turn around. The Devil's Bridge trembled over the rampaging Bartang and clutched at a narrow path on the far side. The path disappeared into a chaos of rock and picked its way over ravines and waterfalls for another four miles to the almost inaccessible settlement of Ridz, where a team fights every inch of the way to produce 13 hundredweight of leguminous plants, 13 hundredweight of rye and 11 hundredweight of wheat per acre.

"When you go through Porshnev," Shanbe suddenly said, "go up to the *chashma*, the stream of Nasir i

Khusrau. They say that the poet came there after his wanderings, stuck his staff into a crevice in the rock and made a fire. When he pulled out his staff a stream began to flow. Quite undismayed, the poet took some smouldering brands from the fire and threw them into the water. They put out roots and grow there to this day.

"So the old folk tell. Fire, water, earth and air give life. One has only to work, to plant the staff. Of course, as an astronomer I could say that the trees beside the *chashma* are much younger than the times of Nasir. But as I see it, that's not so very important."

Shanbe grows wheat, onions, water-melons and pumpkins on his tiny experimental plot outside his office. He spends considerably more time there than at his desk. After all, he is in charge and expected to give good advice. So he must test everything himself first.

We sauntered through Rushan and listened to the evening sounds. Radio music blared forth into the street, dynamic voices carried from the cinema, and somewhere the fragile notes of the *rubob* sounded. The Martian canals on the mountainsides darkened while the peaks flamed crimson in the sun which seemed in no hurry to depart.

The lights went on in the tea-house, illuminating the *piolas* and the chess boards. Dark-faced madonnas wrapped their little ones in bright shawls. The first dressed-up-for-the-evening young men strutted out into the street.

It was time to go. The cross of life, of which Basir had spoken, was stronger than the desire to stay; and why, who knows?

We mounted a hill and Malikov pointed out the tiny seismological station. A very young man with a fair tuft of hair dashed into it.

"The seismologist," Malikov said. "A Muscovite. Works here."

The seismologist greeted us with an amusing air of condescension typical of young men who have barely taken their first step along the road of life. For some reason he was surprised to meet a real live author, and invited us in. Immediately the 184 themes for intelligent conversation were unreeled, each naturally developing strictly social questions which no thinking person could possibly avoid. Literature got it, and the arts and sciences and the fact that there was no hot water.

But when we left, Malikov let out a sigh and began to tell me in great detail the story of the young man's life, a difficult life, bound up with "personal matters" distant in space and therefore particularly close to the heart. Malikov did not wallow in the story. He was concerned, thoughtful and tactful.

"If only we could regulate the heart," he said. "Who would refuse to assuage the pain? But who can permit himself to interfere with other people's hearts?"

The cross of life, indifferent to trifles, hurried me onwards. Everything will be as it should be, even if it be otherwise. In this case it was otherwise.

Perhaps I should have stayed. Perhaps I was briefly necessary to the young seismologist, who read my hooks and therefore had a claim on me. Perhaps the Moscow talk, fermented on real misfortunes, was stronger than vodka and should have been drained with my erstwhile companion. . . .

I thought of these things as I travelled through the night, when it was already too late to turn back. The only objects which existed were those picked out by the headlights. I had behaved wrongly. The only treasure which wayward fate flings to us on our journey is affection for our fellow men.

And I remembered another ditty I had heard in Vanch: "Savage and wild is he who has no room in his heart for talk. . . ."



In the morning I was close to the stream of which I had heard in Ruzhan.

Nasir i Khusrav was a poet, thinker and wanderer. He made his bonfire in what is now Porshev. The stream of Nasir i Khusrav forms a pool which is lined by a cement parapet. In this one feels that eternal eastern desire to conserve water, for contemplation of a smooth body of water brings spiritual solace.

In these regions Islam reigned, but an enlightened Islam, eased by a type of protestantism. Here women were always free and men industrious. Knowing people say that Nasir not only brought songs and profound wisdom; he also taught people how

to work the land and put the gifts of nature to use. Some say he was a saint who had accounts with the Prophet Mohammed himself. Others say he was a poet and that is why people thought he could perform miracles.

The pool ripples in its cement embrace and the plane-trees (perhaps those very ones that took root from the smouldering brands?) droop over the water. They too are cemented round, and on the parapet there is a *piala* so that the parched passer-by may quench his thirst. And the *piala*, they say, is the very one that Nasir drank out of.

So let them think! Perhaps pedantic archaeologists can tell you the exact age of the *piala* and whether it is as old as the legend or not. But Nasir lived. His wonderful writings are a proof. He taught that the world was fascinating, instructive and marvellous.

And women come to draw water from the stream for daily needs because life goes on and on, for ever.

It was time to move on to Khorog, the high-altitude capital of the Pamirs, to discover the truth of the well-known saying, "Who in Khorog has not been, the Pamirs has not seen."

I had hardly left Porshev behind when the slender poplars of Khorog began to appear. Along the road young kids practised scampering over the rocks, training for their life in the high mountains. A sign beside the road read, *Rohi Safod*—"Bon Voyage". This was Porshev's farewell. A few miles farther along,

a Khorog sign greeted us, *Hoosh Omadod!*—"Welcome!"

These little signs are an essential feature of Pamir roads. If in paved parts of the world road signs are dictated by common courtesy, here they are dictated by circumstances: you would have to have a heart of stone not to wish *Bon Voyage* to anyone starting out on these roads.

And so the poplars of Khorog eventually straightened out into an avenue of trees on either side of a paved road with all the appearances of a city street, including the inevitable traffic signs which forbid blowing horns, passing, driving above the speed limit, parking and in general any demonstrations of wilful independence on the part of drivers.

Green Khorog was obviously gradually casting the last traces of its patriarchal past, and shone with European finery. Girls in multicoloured dresses over trousers were thinner on the ground than in Vanch or Ruzhan, while in the case of those one did come across there was a little more dash to the trousers than tradition envisaged and the dresses bore the unmistakable imprint of a fashion magazine.

The men wore suit-coats with vents and, eschewing the *tlubetelka*—the traditional, square skull-cap of Central Asia—bared their heads to the open skies.

And at this point I remembered some verses on capricious fate and its passion for chance meeting. Naturally the first person I met was a Moscow journalist, who dragged me out of the jeep.

"Guest of the high mountain peaks!" he shouted. "Let us give a dinner in honour of the guest!"

I climbed down and found myself in the familiar Moscow element—delightful, noisy, wild and instructive.

It was extremely instructive because in two minutes I learned that Vanch is not the Pamirs. And Ruzhan is not the Pamirs, either. Nor is Khorog. All these were Badakhshan and Badakhshan is not the Pamirs.

Afraid of hearing in another moment that the Pamirs are not the Pamirs, either, I hastened to ask, "Well, what are the Pamirs?"

I discovered that the Pamirs are Murghab. Murghab, because during archaeological digs a tablet was discovered which, when deciphered, announced "Who in Murghab has not been, the Pamirs has not seen".

And so the two of us set off in search of a vehicle which would take us to Murghab.

We were in luck. Not only did we get transport, we acquired an excellent guide in the shape of a geologist, of whom there are quite a few in the Pamirs. He will not take offence, I'm sure, if I call him typical.

The length of time a prospecting geologist has spent in the field can be estimated from the length of his beard. Our companion was still clean-shaven. The closer we came to the scene of the geological expedition's activities, the more often we ran into his colleagues, all adorned with various degrees of hirsute growth.

In time we learned to divine the widely different responsibilities of

the fraternity with a remarkable degree of accuracy. For example, the man with the longest beard would be responsible for provisions. He had arrived in the field first in order to organise the base camp, food stores, etc.

The fraternity explained that a beard was the best possible protection against blackflies and all manner of little biting insects that plague man.

I found this explanation perfectly satisfactory. After all, before reaching their target the little pests would have to struggle through a monstrous jungle of beard, and probably expire en route of hunger and loneliness.

Besides, a beard lends an air of maturity to the wearer. A geologist without a beard is like a lion without a mane. Geologists' wives don't understand this simple truth, and present their husbands with shaving equipment, thinking they are doing them a favour. And the shorn lion pads softly about his comfortable winter quarters, impatiently ripping off the calendar pages one by one with an accurate swipe of the paw.

Geologists are a rather special tribe. They have their own songs, their own passions, their own tales and poetry. Much has been written of this clan. They are an essential part of any story, book or film which deals with the call of the wild. But oddly enough, I have never met a single geologist who was satisfied with the way "he" was portrayed in art or literature.

Perhaps the secret is that books should be written about people, not

professions. Besides, the desire to please the customer, so praiseworthy in the service trades, has no place in art because art is a search, a process of reasoning, not stitching a cloth whole according to a pattern.

We climbed higher and higher along the road to Murghab, avoiding cave-ins and fallen rocks, crossing rivers which now flowed decidedly downhill and here and there turned into waterfalls.

Badakhshan gave way to a Pamir plateau reluctantly, placing obstacles in the road and raising its peaks ever higher. The mountains became lighter, faded, vegetation melted away and finally disappeared altogether, giving way to a kind of thorny shrubs, standing stiffly at a respectful distance from one another. Snow appeared, under attack by the sun but still firmly clinging to the rocks.

Koitezek loomed closer—almost 13,000 feet above sea level. The pass at Koitezek looks like a row of shelves over which toy trucks crawl loaded with bric-a-brac. In reality they are huge lorries carrying important loads.

And here the engine began to give up the ghost. The rarefied air was not able to dilute the petrol quickly enough and the mixture was proving too rich.

Our driver, Kadam Hashnazov, browned by wind, sun and dust from the road, hummed a song under his breath about vanity of vanities and having to get on. Just before the pass, he stopped to get out and stretch his legs.



*School in Parshnev*

*Women with tambourines at wedding*





It was freezing cold. The clear, polar sky looked indifferent, otherworldly.

"Can you breathe all right?" he asked.

"So far."

"Good for you. Let's go."

We began to ascend the stone shelf. Exclamation marks—danger warnings—punctuated our way. It seemed to me that question marks or dot-dot-dots would have been more appropriate to the style and temper of the road.

At the very crest, along the narrow winding road hugging the precipice, there had once been concrete posts. Now nothing remained of them except the steel frames, bent like grass by the wind. The frames stick out into space as though knocked down by a giant hammer.

In winter the ravine is filled with snow, and snow saves breakaway vehicles which can be hauled back on to the road. But the traces of winter are especially clear when there is neither snow nor posts.

Kadam resembled an experienced surgeon during an operation. He not only knew exactly what should be done, but also knew that he was battling wayward nature. I must also note the operation of the laws of chance: oncoming vehicles were met with precisely here, in the most unlikely places.

The snow was disappearing. Along the road you could see traces of snow drifts that evaporated without melting. The snow left no puddles, no rivulets. It was shrunk by the sun, and the wind carved out strange

shapes, inclined towards the sun—winged steeds, elongated horse-men, madonnas, discus-throwers.

The snow was whipped off in all directions and the figures stood on a few points without toppling or crumbling before their appointed time. And all the figures reached upward, towards the sun, towards destruction.

★ ★ ★ ★ ★

The first object that met the eye in Murghab was a volleyball net stretched across the main street, bringing one's attention to the fact that even in conditions of thin air and low pressure, it is still possible to play volleyball. Suspended over the net was the sign, "No Lorries or Motorcycles". Lorries and motorcycles tempted fate under the serene gaze of a traffic militiaman and under the very sign itself.

I was always touched by the passion for traffic signs displayed by the traffic control department. In one mountain hamlet consisting of ten houses I saw the sign "No Horn Blowing", which all drivers seemed to see as incentive to do the opposite.

Murghab lies in a small valley which does not boast a single blade of grass. Here and there little tufts sprout, resembling old-fashioned pincushions. And over Murghab a radio blared and passers-by whistled the latest pop tune.

Behind the counter in the tea-house, a man with the face of Tamerlane presided, with long, drooping moustaches and a chef's hat on his head. The walls were decorated with paintings.

The local artist obviously had many brilliant colours at his disposal, far more than were needed for a realistic depiction of the landscape around Murghab. So he painted his Murghab as he saw it, vivid, using all the colours of the rainbow. He couldn't care less what the pedants thought. He painted because he wanted to, and if nature was miserly with its colours, so much the worse for it!

We sat down at little tables such as one might find in any café and drank our green tea. Along the walls ran a low dais covered with rugs for those who prefer sitting cross-legged.

The tea-house was full.

Men who had driven their lorries over the winding Pamir roads through the night sat slowly and thoughtfully chewing their food, like hungry saints after a routine miracle. Their lorries stood outside, awaiting their masters under the sign "No Parking".

★ ★ ★ ★ ★

When the old man who looked after the herd of yaks saw our jeep, he rose in a dignified manner from the stone he was sitting on and approached. The yaks nibbled at the little pincushions. Strange animals—they snort like pigs, look like cows with horses' tails, and sport the horns of an antelope.

"Salom. The way is long but the kettle is boiling . . ."

This was the simple kindness of the Pamirs. Perhaps below, in the everlasting frantic rush, nobody would pay attention to a stranger.

But here on the plateau, under the very heavens, close to the moon and the stars, there are other laws.

Here water boils quickly, at less than "boiling point", but then food takes a long time to cook. Majestically, in slow motion the yaks pick their way from pincushion to pincushion. Here a handshaker takes time and nobody rushes to ask questions. If a man is on the road it means he has business. And men's affairs are always matters of moment.

We were going to Lake Rangkul, to a tiny settlement high as the clouds, where herds graze, geologists go about their work, the radio plays and only trees and grass are lacking. On the lake the ice was disappearing and ducks quacked plaintively.

Kadam, our driver, who has relatives and friends everywhere, had already expressed the thought in Murghab that a barbecued sheep was considerably more interesting than one walking around raw.

While we were busy with our newspaper work, pestering the local chairman with questions, Kadam was busy with his own affairs, as a result of which I became an *aksakal*, the head of the delegation, and as guest of honour I was presented with the head of the sheep for further portioning and distribution.

"Kadam," I asked him later, "why did you make me *aksakal*?"

"You looked depressed," he replied. "I thought perhaps it would give you pleasure. Many become cheerful in such circumstances."

But my rapid rise in status did not

cheer me. I was tormented by mountain sickness. It does not last long. But while it lasts, life loses its savour. Shooting pains of rheumatism dart into muscles, the nerves of long-gone teeth ache, and agonising memories torture the soul.

And finally, when I could no longer stand my thoughts, I said, "Kadam," I said, "give me the wheel, Kadam. For I am drowning in the depths of soul-searching."

"Take it," said the good Kadam. "Think of the road and not of yourself. The road always helps."

★ ★ ★ ★ ★

Not far from Alichur it became clear that the battery would go long before we reached Khorog. Kadam had noticed, but his kind face expressed no concern.

"Where can we fix it?" I asked.

"We'll get it fixed," he replied and the familiar philosophical note had crept into his voice. *Vanitas vanitatum!*

The ancient philosopher who had expressed this thought had taken possession of the soul of my friend, and the mute wasteland surrounding us testified that all indeed was vanity.

"Kadam," I said, changing gears and fighting a losing battle to keep calm, "the dynamo hushes just went hush."

"Yes, they did," he replied with the voice of the ancient philosopher.

"But we have no spare parts!"

"No, we haven't," he agreed.

"What shall we do?"

"Drive on."

The road wound from hill to hill,

doing its best to straighten out in the stretches between each dizzying crest.

The Pamir hills, resembling mounds shaven clean by an over-enthusiastic barber, did not look promising as far as a car-repair shop was concerned, or even a camel watering-hole. There are places where you can say quite correctly that there is absolutely nothing. Probably such landscapes may be met with on the other side of the moon. The engine screamed like a hysteric determined to attract attention.

"Kadam," I said, "try and think. Perhaps you have spare hushes?"

"I've thought," said Kadam. "I don't."

"What are we going to do?"

Fedchenko glacier, the largest in the world



"We are going to drink tea in Alichur."

"And then?"

"Then we shall go on to Khorog."

"How?"

"In our 'mountain goat'."

In Alichur I stopped our "mountain goat" beside a blue motorcycle with a sidecar over which children were swarming. Three adults were debating something about motorcycles. A smell of petrol permeated the air, and hope welled up at this, admittedly slight, pretext.

The formal Pamir ritual of shaking hands began. Without giving or asking names, with majestic dignity, everyone—men, women, old folk and children—within a radius of 50 paces included themselves in the

ceremony. The right hand is stretched out and when the visitor grasps it, the left is closed over it.

"Salom . . ."

This word covers many things: it means how are you, and congratulations on safely coming through your journey, and an invitation to sip green tea, and best wishes for a good trip.

A man from the Pamirs cannot drain the bottom of a wine-harrel to the last drop. He has no wine-harrel. All he has is four *pialas* and a tea-pot.

He also has the thousand-year-old precept of giving himself the tremendous pleasure of sharing his last possession. He places his guest on a worn bit of carpet, makes tea, brings

yak-butter and unleavened bread. This entertainment costs him considerably more than a feast in more benign regions.

On the other hand, he is serene of spirit because the traveller who has removed his boots by his carpet has also removed the cares of his journey and will rise refreshed and ready to face the next pass.

"Kadam," I said, "this man is not rich and we are hungry. We must express our gratitude."

"Yes," said Kadam, "we must. We will say *rahmat*—thank you."

"But that's not enough, Kadam!"

"It is. When he comes to Moscow you too will lay out a carpet and he too will say *rahmat*."

"But he will never come."

"No, never," Kadam agreed.

Our host, Karamsho, was head and sole teacher of a school attended by 12 pupils.

Karamsho is a young man almost fresh out of teachers' training college. His 12 disciples are in three forms: two in the first, three in the second and seven in the third. They all study in one room without interfering with each other.

★ ★ ★ ★ ★

We raised the bonnet and Karamsho peered at the engine with us. He expressed his sorrow that he could not take his motorcycle apart because its parts would be of no use to us. Then he looked thoughtful and finally went away. Kadam began to clean the engine.

"We'll replace the missing parts."

"How do you know?"

"He's gone. That means he will get what is necessary. Otherwise he would not have gone away."

Everything will be as it should be. Even if it be otherwise. I consider this great truth to be the final stage of initiation into wisdom. I have been amazed at its universality on more than one occasion. And now everything was as it should be.

Karamsho had brought the brushes. But it was otherwise, because the brushes did not fit. Nevertheless, the fact that they did not fit in no way affects the universality of the truth. Karamsho brought tools and set to work.

When a man sets off on a journey, he has no idea what is in store for him. That is the first stage of enlightenment. But having crossed the threshold with an open heart, he will find both precious gems of knowledge and the keen stimulants of contemplation on his road. And that is the last stage . . . that is when you begin to realise how little time man has in general and on a journey in particular.

And so we left Alichur, intending to stop off at Lake Bulunkul on the way.

At point A on the Alichur road there is a marker indicating that in such and such a direction lies point B—Bulunkul. Between point A and point B there is, theroretically, a road. That such a road exists and can be traversed has to be proven, and proven as quickly as possible, for the sun is already high and will not linger.

Our "mountain goat" felt its way

blindly across narrow, rushing torrents, struggled up hills and slid down gullies. Our way was strewn with the bleached skulls of mountain goats and yaks. At last, on the next tiny plateau, some white clay *kibitkas* came into sight.

The word *kibitka* is an old Pamir name for the hard-packed clay huts, windowless, airless, lacking even an escape vent for smoke. Such *kibitkas* still survive here and there, but fortunately more often than not it is only the name that has survived. These *kibitkas* were well-made clay houses, with windows, and electricity supplied by their own generator.

Bulunkul was still not completely free of ice, but fishing was in full swing. The men were after a lively fish called marinka. On the lake, ducks quacked a mating-call, no longer plaintive.

The fishing was engaged in for sport, not profit, as the local state farm concentrated on yak-raising. It is one thing to catch fish to eat, another to catch and transport it over long distances.

The manager of the state farm, a tall, good-looking Kirghiz, described the benefits of specialisation. He was an intelligent, knowledgeable man, who incidentally expressed the thought that the resources of nature are inexhaustible and there is therefore no point in scattering your efforts.

"The yak," he said, "gives milk. But if you milk it, it is no good for meat. We had to decide which was more profitable. We came to the conclusion that meat was."

We drove right up to the lake with a motorcyclist leading the way. On the way we ran into a gay procession. In front were two husky fellows in cotton-padded coats, carrying an oar with marinka strung on it. The catch was so good that a Moscow angler would have been green with envy.

Kadam cried "Stop!" and jumped out of the jeep. Naturally, 50 per cent of the anglers turned out to be "family" and the rest his dearest friends.

The fine Pamir ritual of hand-shaking began, followed by the fine Pamir ritual of hospitality. The fish was placed on the ground and divided in half.

I began to quibble.

"My friends," I said, "you are denying us the pleasure of catching our own fish and showing our Moscow competitors a thing or two. Not only have they never caught marinka in Lake Bulunkul, they don't even know what train to take!"

Our new friends were in a quandary. Then one of them banded me his shotgun.

"Here," he said, "shoot a duck."

It was not enough for him to share the fish. He had to share the pleasures of bunting.

I took the gun, aimed, fired—and missed. The ducks quacked excitedly for a couple of minutes and then decided there was nothing to fear. "Perhaps you would like to take a ride on my motorcycle?" the motorcyclist offered.

He was much more upset by my failure than I was and wished at all

costs to comfort me if he could.

On the journey back and in Khorog itself, everything was unchanged. The biting wind told us that there was no need to rush, no flying weather, the pass was still closed and we might just as well have remained in Murghab, or in Rangul, or on the shores of Lake Balunkul. The weather was bad because nature is capricious. And the hotel was full because sacred places are never empty.

I like full hotels. They testify to a heightened interest in the locality. In Khorog there are always masses of people on the move.

Blizzards swept over the nearby mountains. The list of people desiring to book a seat on the next plane grew longer. We, too, got ourselves added to the list. I had the impression that we were not merely given priority, but placed ahead of the captain. But the weather did not break.

And then, a seemingly insignificant event occurred which underlined the warm thoughtfulness so typical of the Pamirs. It concerned me personally, but don't we all make generalisations based on personal experiences?

Kadam arrived and brought me a reference written by hand on a double sheet taken from an exercise book. The reference, addressed "to whom it may concern," stated that he, Kadam, had handled my driver's test over mountain roads and that I had "received excellent marks on all counts" and was "fully qualified to drive a vehicle over the mountain roads of Badakhshan."

Kadam had considered it his duty

to perform this service for me. It must have taken him a long time laboriously to write out the formal wording in Russian. Kadam was no office clerk, he was a driver. But he was a good man, for whom it was no trouble to give pleasure to other people.

For me, this document is the most cherished of all the official documents and references I have ever received: how sad that it is also the most useless. How sad that I cannot show this heart-felt reference to a traffic inspector. To him it would be only an utterly worthless scrap of paper.

In the morning we were roused and corralled. The word "weather" sounded like "victory!" The ticket-seller for the airline ripped off tickets like a bus conductor in the rush hour. God knows what the philosophical quartet of earth, water, fire and air will present us with in another hour or two! Hurry! Quickly!

We were already on the field on our way to the impatient plane that stood pawing the ground like a snorting steed, when a familiar sound caught my ear. It was our "mountain goat".

Kadam jumped out of it under the disapproving eyes of his new passengers.

"Leonida," he cried, "I was on the way to Murghab when I realised the weather was breaking and you'd be leaving! So I turned back. Goodbye! Come again!"

We embraced. Kadam jumped into his jeep and drove off to Murghab. He had done all he could.



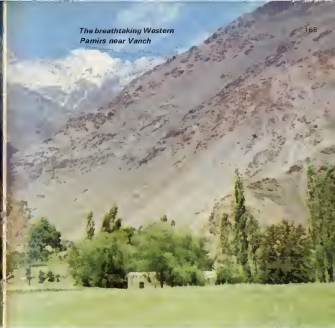
*Woman with silk cocoons in the village of Vanch.*



*Girl from Khorog*



*Wedding party, Parkhar district*



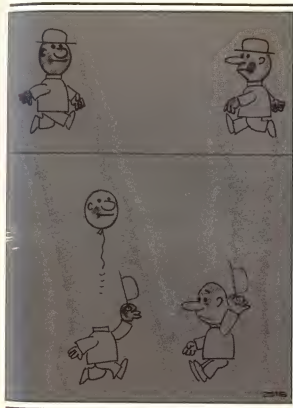
*The breathtaking Western Pamirs near Vanch*

*Local centenarian*



*Schoolgirl in Western Pamirs*





## TWENTIETH-CENTURY HOBBY



Making toys and dolls out of wood and rags is the favourite pastime of many people. Now the choice of materials is much more varied and includes nylon, plastics and ball-bearings. Valentina Tetryukova believes that radio parts are as good as any, if not better. This fisherman, for example, is made almost entirely of transistors.

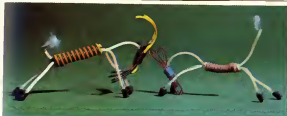
Right: "Rendezvous on Mars"

Far right: "The Jolly Walker"

And these "billy goats" are made of wire insulators.

"The Rooster" has always been one of the favourite characters of Russian folk artists, and he takes his place in this twentieth-century gallery.

Valentina Tetryukova's flights of fancy produced the strange specimens of the animal kingdom on the far right. Guess what they are!



## CUISINE OF OLD RUSSIA



All quantities in the following recipes serve 4.

### Vladimir Salad

- 3 beets
- 2 carrots
- 5 potatoes
- 1 cucumber (fresh or salted)
- 8 tablespoons green peas
- 3 teaspoons sugar
- 2 to 3 teaspoons vinegar
- $\frac{1}{2}$  cup mayonnaise
- Salt, parsley, dill and green onions to taste

Peel carrots and beets, wash, and slice in strips. Place each in different saucepans, sprinkle with sugar, add enough water to cover and stew over low flame for 10 minutes.

When beets are done, add vinegar. In the meantime, take the boiled

potatoes and slice; peel cucumber and slice lengthwise.

Take green peas and all prepared vegetables and place in salad-bowl without mixing. Pour mayonnaise over top and sprinkle with parsley, dill and chopped green onions.

### Russian Pokhlyobka (tbick soup)

- $\frac{3}{4}$  lb chuck beef with bone
- $\frac{3}{4}$  lb potatoes
- 2 $\frac{1}{2}$  tablespoons butter (for frying)
- 3 or 4 onions
- $\frac{1}{2}$  cup dry white wine
- Salt, pepper, dill and bay leaf to taste

Cut beef from bone and slice in short strips. Make broth from bone. When ready, pour broth into clay pot, add meat, and simmer in medium oven for half an hour.

Slice onion in rings and fry until yellow.

In the meantime cube potatoes

and add to soup and now continue cooking on top of stove over low flame. In ten minutes add fried onions, and five minutes later the wine, bay leaf, parsley, dill and simmer another two minutes. This soup looks well served in wooden bowls and eaten with wooden spoons.





*Russian Pokhlyobka*

*Right: Vladimir Salad*



### Meat in Beer

1½ lb beef steaks cut into 8 pieces  
 5 tablespoons butter  
 3 tablespoons flour  
 1-2 tablespoons tomato paste  
 1 pint beer

#### *Marinade*

1 pint beer  
 2 or 3 onions (finely chopped)  
 2 or 3 bay leaves  
 Salt, pepper to taste

Pound meat. Make marinade in enamel or china bowl. Leave meat to soak at least five or six hours. Meat will taste even better if left overnight.

When ready to cook, fry meat on both sides in butter (2 tablespoons). Remove meat and in same pan place 3 tablespoons butter and when it starts to bubble, add flour, tomato

paste and cook all together for five minutes. The sauce should have the consistency of thick sour cream. If it is a little too thick, add water.

Pour sauce into beer in pan, add meat, and stew gently for 30 or 40 minutes.

This meat goes well with buck-wheat porridge or fried potatoes, green peas and cucumbers.

### Fried Meat

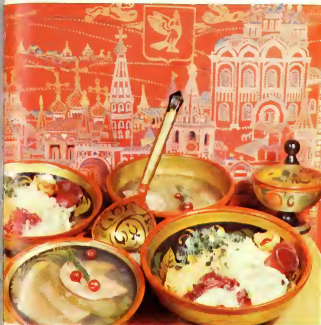
1½ lb beef  
 3 lb potatoes  
 4 tablespoons butter  
 2 onions  
 ½ cup beef stock  
 1 cup sour cream  
 Bay leaf, salt, pepper, parsley, dill to taste

Peel potatoes and cube, fry slightly in butter. Slice onions in rings and fry until yellow. Beef should be sliced in small pieces and fried lightly.

In a heavy pan or clay pot place meat; then, in layers, potatoes, onions,

salt, pepper, bay leaf, and add stock. Cook slowly in oven for 30 minutes. Ten minutes before serving, add some dry wine. When ready to serve, pour sour cream over top and sprinkle with parsley and dill.

*A traditional Russian meal looks even better served in wooden bowls, with wooden spoons.*





# RUSSIAN FOR YOU

## ДОРОГИЕ ЧИТАТЕЛИ!

С помощью нашей новой серии уроков вы сможете познакомиться с отдельными интересными выражениями и понятиями, распространенными в современном разговорном русском языке.

Имея под рукой словарь, вы легко прочтаете и поймете наши тексты; особенно трудные обороты вы найдете в наших комментариях.

Dear readers!

In our new series of lessons, you will meet various colloquial expressions commonly used in modern spoken Russian.

With the aid of a dictionary, you will easily be able to read and understand the texts below; the more difficult expressions can be found in the commentaries at the end on page 183.

## Урок первый

## Lesson One

Сёсна на поё<sup>(1)</sup>

- Привёт! Как делá?
- Ничего. А у тебя?
- Так себе. Сдаю хвосты<sup>(2)</sup> за прошлый год.
- Ну, и как?
- Схватил<sup>(3)</sup> трóйку\* по математике, сопромáт засóчал.<sup>(4)</sup> Завтра идó пересдавать.
- Ну, ни пóуха, ни перá.<sup>(5)</sup>
- Иди к чёрту.<sup>(6)</sup>



\* A "three" is a pass mark in the five-point scale system.

### Забьты ленивого студента

I курс



Ой, выгонят!!

II—III курсы



Ну же, да выгонят?!

IV курс



Пусть только выгонят!

V курс

Ха-ха!!



Чтобы студента не выгнали, ему нужно помнить народную мудрость:

- 1) Век живи — век учишься.<sup>7)</sup>
- 2) Повторенье — мать ученья.<sup>8)</sup>
- 3) На бога надейся, а сам не плошай.<sup>9)</sup>



### Он не найдёт сердца

На экзамене в Петербургской Военно-Медицинской Академии известному русскому врачу в третий раз сдавал экзамен один из студентов. Он не мог ответить ни на один вопрос экзаменатора, так как не посещал ни лекций, ни семинаров. Экзаменатор и на этот раз прогнал студента. Немыслимо позже к профессору пришли взволнованные друзья лентяя. Они рассказали, что студент очень расстроен новой неудачей и думает покончить с собой, собирается вооружиться ножом в сердце.

— Не волнуйтесь, — успокоил их профессор. — Ваш друг не знает анатомии. Он не найдёт сердца.



### Знаете ли вы, что . . .

. . . первый в России Московский Университет был основан в 1755 г. великим русским учёным М. В. Ломоносовым.

. . . старое здание Московского Университета построено в 1786 г. великим русским зодчим М. Ф. Казаковым и было перестроено архитектором Д. И. Жилярди после пожара 1812 г.

. . . в Московском Университете учились многие выдающиеся деятели русской культуры: архитектор В. Баженов, писатели И. Новиков, А. Фонвизин, А. Грибоедов, А. Герцен, М. Лермонтов, В. Белинский, И. Гончаров, И. Тургенев, А. Островский, А. Чехов, В. Бросов; артисты — Л. Собинин, Е. Вахтангов, Вл. Немирович-Данченко и другие.



. . . в здании Московского Университета им. М. В. Ломоносова на Ленинских горах более 2 тысяч научных и учебных помещений. Если вы захотите побывать во всех этих помещениях, вам придется пройти около 150 км.

. . . на здании Московского Университета им. М. В. Ломоносова на Ленинских горах установлены самые крупные в мире часы, термометр и барометр.



Вера Панова — известная советская писательница. Советуем вам прочитать её повесть о ребёнке «Серёжа» и посмотреть фильм по этой повести.

Vera Panova is a leading Soviet writer. We suggest you read her story about a small boy, "Seryozha", and also see the film.

Another story by Vera Panova starts on the next page.

## ШКОЛЬНЫЕ ТОВАРИЩИ

(По повести В. Папиной «Конспект романа»)

... Два мальчика живут в большом сером доме: Костя Прокопенко и Жёня Лёгинов.

У Кости Прокопенко отец убит в войну, дедушка умер в блокаду,\* а о прадедушке своём Костя никогда ничего не слышал и никогда не думал.

Только мать у него, она работает вагоновожатой на трамвае.

Комната у них одна, и мать не любит, когда к Косте заходят ребята.

... Они растут в ленинградском сером доме и понемногу вырастают. Шестнадцать лет Костя Прокопенко пошёл работать. Он поступил в таксомоторный парк мыть машины. Работа нудная, и ему нравится.

В гараже люди взрослые, со взрослыми тревогами.

Костя старательно делал своё дело, присматривался к машинам и всё реже вспоминал о том, чем жил когда-то.

А к Жёне Лёгинову Костя совсем перестал ходить, не тянуло.<sup>10</sup>

Когда он достиг подходящего возраста, его направили в шофёрскую школу без отрыва от производства.<sup>11</sup>

Он шёл с первого занятия довольный... и около дома повстречал Жёню.

— Здорово, — сказала Костя оживлённо.

— А, Костя, здравствуй, — сказала Жёня с обычной своей приятностью.

Они не виделись уже давненько.<sup>12</sup>

— Как живёшь? — спросил Костя.

— Да что,<sup>13</sup> неприятности у меня, — ответил Жёня с улыбкой. — Ты, может, слышал?

— Ничего не слышал, что такое?

— Обманул ожидания предков.<sup>14</sup> Медаль<sup>†</sup> рухнула.<sup>15</sup>

— Что ты! А я всегда был уверен, что кто-то, а ты кончишь с блеском.<sup>16</sup> Может ещё вытиснешь?<sup>17</sup>

— Да нет, уже ясно в общем. Уже не успею вытиснуть.

— А в сущности что за важность, — сказал Костя. — Ну без медали, в что?

\* Имеется в виду блокада Ленинграда немецкими войсками во время войны 1941—1945 гг., когда сотни тысяч людей умерли от голода и артиллерийских обстрелов.

† School leavers who have graduated with honours receive gold and silver medals.

— Да бóже мой! — сказал Жёня. — Да что она мне? Но предки, понимаешь, прямо с ума посходили. **Фёрмештай!**<sup>18</sup> ад в доме, выдерживаю истерику за истерикой. Что у тебя?

— Да, помалёньку. Вот в школу шофёров поступил.

— Вот как, — приятно сказал Жёня. — Очень рад за тебя. Ты ведь этого хотел?

— Хотёл.

— Хотёл и сделал, молодец. Ну, будь здоров,<sup>19</sup> побежал я.

— Пошёл.

— Заходи.

— Спасибо.

И весь слушай.<sup>20</sup>



### Explanatory Notes

<sup>11</sup> Lit. "on the nose". In Russian this expression means "just around the corner". Used with a slightly negative connotation: e.g., *Зимá на носу, а ты всё ещё живёшь на даче.*

<sup>20</sup> Exams failed that must be taken again before the next session. Could be used in relation to work: e.g., *У меня много хвостов по работе, и поэтому я не могу сегодня пойти в театр.*



<sup>39</sup> Colloquial alternative for «получить» (get) in case of marks. This expression is fairly common and is used in various situations like, for instance, Я схватил грипп, болёзнь. Он схватил выговор (he got a reprimand).

<sup>41</sup> Fail, flunk (at an exam).

<sup>52</sup> Expression used to wish a person about to take an exam good luck, requiring the answer in note No. 6.

<sup>62</sup> Go to the Devil (often used in answer to «ни пуха, ни пера»).

<sup>72</sup> Live and learn.

<sup>82</sup> Repetition is the mother of learning.

<sup>92</sup> God helps those who help themselves.

<sup>102</sup> (Roughly) Felt no attraction towards: e.g., Егó тинóло обрáтно в дёрёвно. He felt like going back to the country.

<sup>112</sup> I.e., he worked by day and studied in the evening.

<sup>122</sup> Quite a time ago, from «давно». Introduces a note of regret or reproach: e.g., Дáвно́шькó я тебó не ви́дел!

<sup>132</sup> (Roughly) Ah, hell.

<sup>142</sup> Modern colloquial for «parents». Lit. «ancestors».

<sup>152</sup> I've ruined my chances of a medal. «Рухнуть» — collapse, fall through, go up in smoke, etc: e.g., Пóтóлок рúхнул. Егó нáдежды рúхнули. Все о́бпланы рúхнули.

<sup>162</sup> (Here) With honours, brilliantly. A superlative expressing admiration, enthusiasm: e.g., Спóртсмён вы́ступил с блéско́м.

Блэск! Great, tops!

Она́ гóтовит — блэск! She cooks a treat!

Блэстáнный. (adj.) Он блэстáнный актёр.

Блэстáще! (adv.) Как ты поживáешь? Блэстáще!

<sup>172</sup> Maybe you'll manage to pull through, somehow?

<sup>182</sup> Absolute, real (used in a negative meaning): e.g., Он фóрмальный дура́к. He's a prize dope.

<sup>192</sup> So long, good luck.

<sup>202</sup> That's the whole story (colloquial).

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